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Ontario Geological Survey
Open File Report 6088

Regional Modern Alluvium Sampling Survey of the Mattawa–Cobalt Corridor, Northeastern Ontario

2002

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ONTARIO GEOLOGICAL SURVEY

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Regional Modern Alluvium Sampling Survey of the Mattawa–Cobalt Corridor, Northeastern Ontario

by

J.L. Reid

2002

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Regional Modern Alluvium Sampling Survey of the Mattawa-Cobalt Corridor, Northeastern Ontario; by J. L. Reid

This release consists of data resulting from heavy mineral processing of 277 samples collected over an area of approximately 3825 km^2 in the Mattawa-Cobalt area, northeastern Ontario. The data consists of kimberlite indicator minerals (KIMs), metamorphosed magmatic/massive sulphide indicator minerals (MMSIMs®) and gold grains recovered from modern alluvium and till samples. The data are being released in conjunction with Open File Report 6088. Files on this release contain information on sample site locations; abbreviations used; sample processing data; KIMs picked and picking remarks; microprobe analyses of KIMs; gold grain data; MMSIMs®picked, picking remarks and assemblages present; pebble lithology data; and normalized KIM results. Data are available as compressed files in ASCII (.txt) and Microsoft Excel (.xls) file format on one 3.5-inch MS-DOS diskette.

This diskette is available separately from the report.

Regional Modern Alluvium Sampling Survey of the Mattawa–Cobalt Corridor, Northeastern Ontario

J.L. Reid

Ontario Geological Survey
Open File Report 6088

2002

INTRODUCTION

The region of northeastern Ontario extending from Mattawa to just south of Cobalt (Figure 1), has been a historical area for silver, nickel and cobalt mining operations. Agnico Eagle Mines Ltd. was a major past producer in both the Cobalt area and to the south in Silver Center, until the late 1980s. In more recent years, the discovery of kimberlites north of this region, near New Liskeard and Kirkland Lake, has triggered an increase in diamond exploration across the area (Allan 2001). In the Kirkland Lake and New Liskeard areas the thickness of glacial sediments ranges from nil to greater than 100 m. Kimberlite, being relatively soft, has been differentially eroded by preglacial weathering and glacial erosion such that it subcrops 3 to 35 m below the surrounding bedrock (McClenaghan et al. 1999b). Because of this deep erosion, all kimberlite pipes in the area are covered by glacial sediments and have no surface expression.

Through indicator mineral and geophysical surveys, several kimberlite pipes and dikes have been discovered in the region within the last 15 years (Figure 1) (McClenaghan et al. 1999). The northwest trending (325°) Lake Temiskaming Structural Zone (LTSZ) is believed to be the fault system through which the kimberlites have intruded (Sage 1996). The western flank of the LTSZ lies north of Temagami. A number of faults associated with the LTSZ, including the Net Lake, South Montreal River and McKenzie faults, trend from the Temagami to Cobalt areas. The intersection of orthogonal structures such as the northeast striking Grenville Front Tectonic Zone and the series of northwest trending faults of the LTSZ represent potential settings for kimberlite emplacement. Therefore, exploration for diamond-bearing kimberlites remains active along the LTSZ (Sage 2000).

To further evaluate the diamond and other mineral potential of this region of northeastern Ontario, the Ontario Geological Survey completed a modern alluvium survey in the Temagami-Marten River area during the summer of 2000 (Allen 2001). The current study, covering the Mattawa-Cobalt corridor (Figure 1), is an extension of that survey. The primary objective of the current study is to extend the regional information base concerning the types and distribution of kimberlite indicator minerals (KIMs) found in modern alluvium southward to the Mattawa – Cobalt area.

Kimberlite is a rock type commonly recognized as the primary host for diamond. The KIM suite of minerals includes pyrope and eclogitic garnets, magnesium ilmenite, chromite, chrome diopside, forsteritic olivine and diamond. The presence of these indicator minerals will be used to determine the prospect for and proximity of any diamond-bearing kimberlites in the area. As well, heavy mineral assemblages were also examined for gold grains and metamorphic or magmatic massive sulphide indicator minerals (MMSIMs®[1]).

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[1] MMSIM is a registered trademark of Overburden Drilling Management Limited, Nepean, Ontario

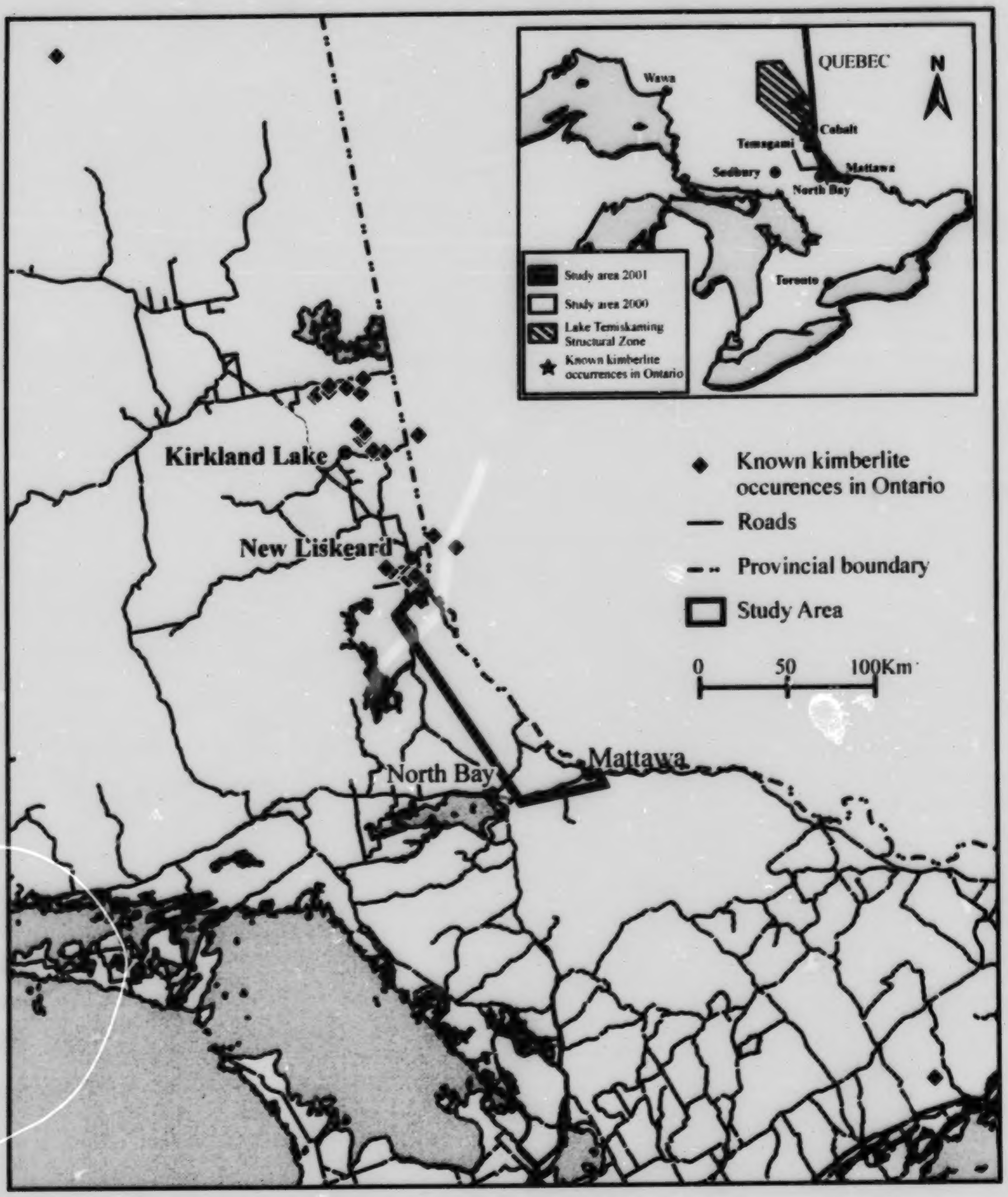

Figure 1: Locations of known kimberlites in relation to the study area (after Sage 1996, Sage 2000).

STUDY AREA

LOCATION

The Mattawa – Cobalt corridor study area is represented on 10, 1:50 000 scale National Topographic System (NTS) map sheets. The northern part of the study area is covered by the southeast corner of the Cobalt sheet (31 M/5), the southwest corner of the Ville-Marie sheet (31 M/6), the western edge of the Fabre sheet (31 M/3) and the eastern half of the Temagami sheet (31 M/4). The eastern quarter of the Ingall Lake sheet (31 L/13) and the western half of the Ottertail Creek sheet (31 L14) cover the central section. The southern part of the study area is represented on the eastern half of the North Bay sheet (31 L/6), the west half of the Mattawa sheet (31 L/7), the southwest corner of the Lac Beauchene sheet (31 L/10) and the Temiscaming sheet (31 L/11).

A network of primary and secondary roads and all-terrain vehicle trails provided reasonable access to the study area (Figure 2; Figure 3-back pocket). The presence of numerous lakes and creeks, as well as the Ottawa River running along the entire eastern border of the study area, provided boat access to otherwise remote locations. The larger lakes allowed for floatplane access, offering an alternate means of transport to isolated sites. In addition, very remote and isolated sites were accessed by helicopter.

PHYSIOGRAPHY

The northern part of the study area falls within the Cobalt Plain physiographic division of the James Region and the southern part of the study area falls within the Laurentian Highlands physiographic division of the Laurentian Region (Bostock 1976). The low hummocky terrain of the Cobalt plain is controlled by flat-lying sedimentary Precambrian bedrock. Ridges produced by diabase intrusions that crosscut the sedimentary rocks interrupt the plain and rise abruptly, 150 to 180 m above the sedimentary units underlying the lowlands (Thurston 1991). Some older Precambrian rocks are exposed as inliers (Thurston 1991). Rock escarpments and steep sided gullies are prominent throughout the landscape with swamps and creeks occupying lower lying areas (Allan 2001). The Laurentian Highlands is characterized by rugged terrain that attains elevations of 600 m asl. The landscape is deeply incised by large rivers.

The largest water body within the study area is Lake Temiskaming which is part of the Ottawa River system and occupies a structurally controlled valley over 60 km in length (Roed 1979). In the southern part of the study area, within the Laurentian Highlands, the dominant physiographic feature is the Ottawa-Bonnechere Graben (Thurston 1991). Major drainage basins represented in the study area include the Lake Temiskaming, Trout Lake and Ottawa River systems. Drainage from the lakes and streams in the northern part of the study area follow either; the gentle, northeasterly dipping peneplain to Lake Temiskaming, or southwest trending valleys to the Montreal River which flows south-southeast into Lake Temiskaming. In the central region of the study area, drainage occurs in a southerly to southeasterly direction into the Ottawa River. In the southern part of the study area, water bodies drain southwest or southward toward Lake Nipissing, Trout Lake and the Mattawa River and easterly into the Ottawa River.

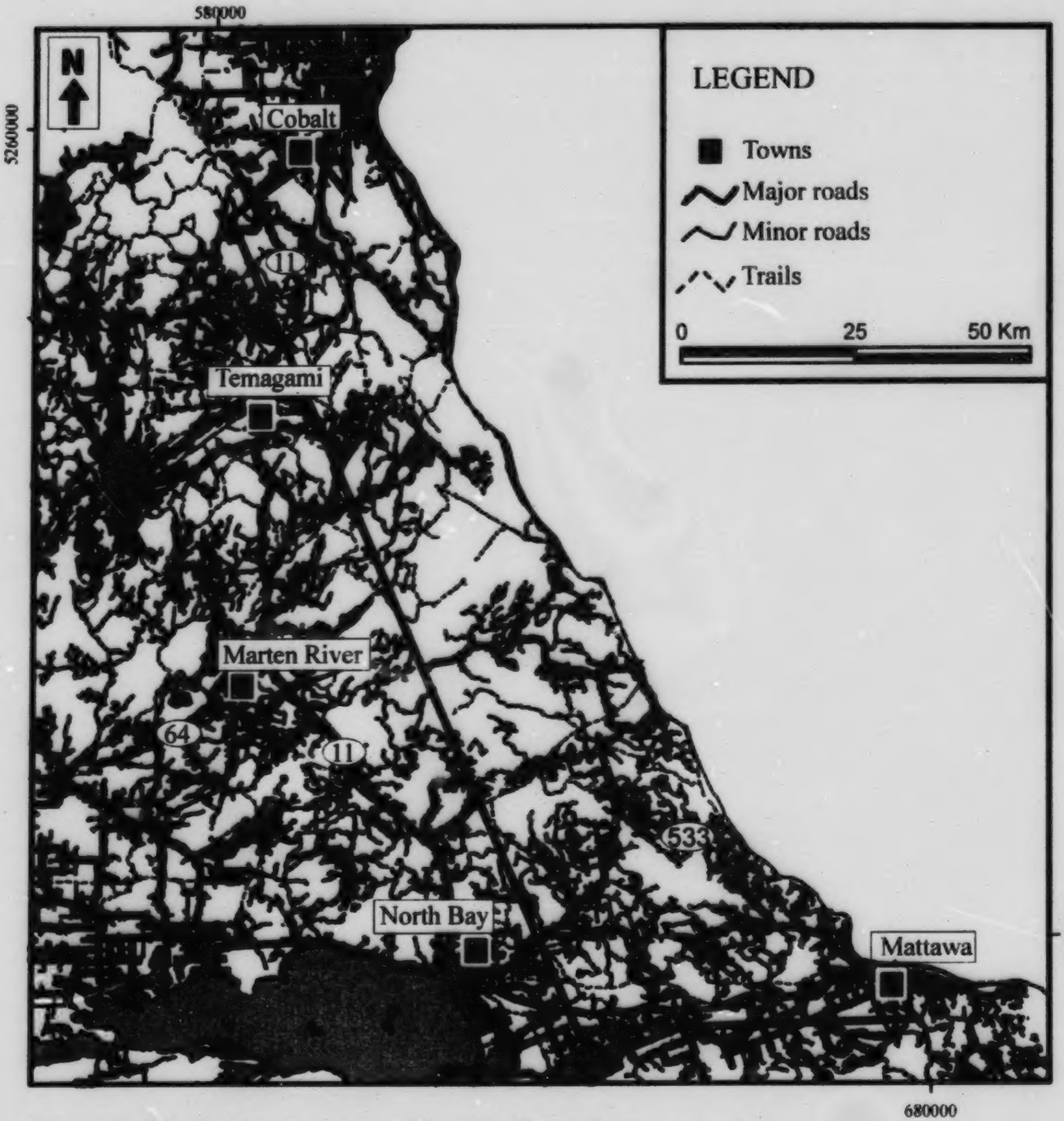

Figure 2: Road and trail systems present in the study area.

BEDROCK GEOLOGY

The intersection of the 3 main provinces of the Canadian Shield – the Superior, Southern and Grenville lies within the study area. The Grenville Front Tectonic Zone (Easton 1991) divides the area into a northern zone consisting of the Southern and Superior provinces, and a southern zone consisting of the Grenville Province (Figure 4). The main lithologic units in the study area are of Precambrian age and are overlain by a layer of Pleistocene glacial deposits and Recent swamp, lake and stream deposits (McIlwaine 1970; Born 1989).

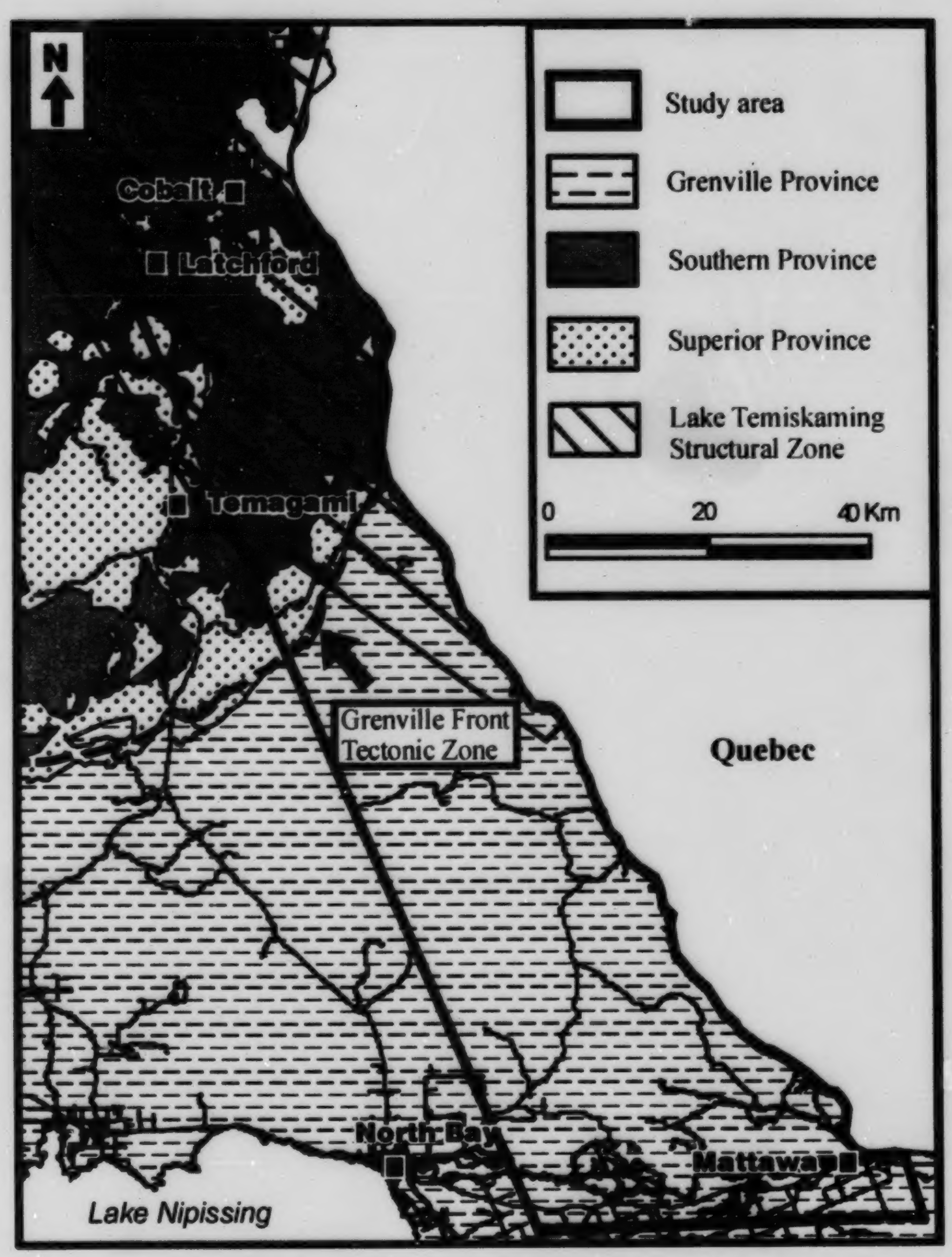

Figure 4: Location and general bedrock geology of the study area.

The oldest rocks found in the area are located in the northern portion of the survey area and are Neo- to Mesoarchean (2.5 to 3.4 Ga) supracrustal, metavolcanic suites of the Superior Province (Figure 5). The Superior Province is divided into numerous subprovinces including the Abitibi subprovince that occupies a portion of the northern part of the survey area. The Abitibi subprovince is a Neo-Archean granite-greenstone-gneiss terrane that developed between 2.8 and 2.6 Ga and is composed of supracrustal to intrusive rocks (Jackson and Fyon 1991).

Within the study area, the Neo- to Mesoarchean aged supracrustal mafic to intermediate metavolcanic suite includes basaltic and andesitic flows, tuffs and breccias, chert, iron formation, minor metasedimentary and intrusive rocks, as well as related migmatites (Ontario Geological Survey 1991). Immediately east and west of the survey area there is an intermediate to felsic suite of supracrustal rocks consisting of rhyolitic, rhyodacitic, dacitic and andesitic flows, tuffs and breccias, chert, iron formation, minor metasedimentary rocks, intrusive rocks and related migmatites. Together these suites were formerly classified as the Keewatin unit (Ontario Geological Survey 1991). The metasedimentary rocks associated with the supracrustal rocks of this age include volcanic greywacke, argillite and siltstone. The metavolcanic sequences were followed by a series of intrusive rocks also of Neo-to Mesoarchean age belonging to the Superior Province. These include mafic and ultramafic instrusives, such as pyroxenite and gabbro, which were formerly classified as Haileyburian units (Born 1989; Ontario Geological Survey 1991). Felsic to intermediate suites were subsequently emplaced; these consist of a granitic plutonic suite and a foliated tonalite suite. These intrusive suites include: foliated to massive tonalite to granodiorite; massive to foliated granodiorite to granite; quartz monzodiorite; quartz diorite; aplite and felsite dikes; minor trondjhemite; and chloritized, sheared and brecciated granitoid (Born 1989; McIlwaine 1970; Ontario Geological Survey 1991). The youngest sequence of intrusives in the study area are mafic rocks consisting of diabase, gabbro, glomeroporhyritic diabase, and lamprophyre dikes. Most of the dikes trend northwest with a lesser number trending to the northeast (Born 1989). These units were formerly classified as Algoman and/or Laurentian (Ontario Geological Survey 1991).

The Southern Province, found in the northern portion of the study area, consists of the Paleoproterozoic Huronian Supergroup (2450 to 2220 Ma) (Figure 5) (Bennett et al. 1991). This Supergroup is subdivided into 4 groups, one of which, the Cobalt Group or the upper most sedimentary cycle, is found in the study area. The Cobalt Group comprises, in ascending order, 4 formations: the Gowganda, Lorrain, Gordon Lake and Bar River formations (Bennett et al. 1991). Of interest to the present study are the Gowganda and Lorrain formations that make up the Cobalt Embayment. The Gowganda Formation is composed of 2 members, Firstbrook and Coleman (Born 1989). The older Coleman member consists of: pebbly wacke, silty-pebbly wacke; arkose, pebbly arkose, pebbly arkosic wacke; arenite, pebbly arenite; mudstone; siltstone; claystone; matrix-supported conglomerates; clast-supported conglomerates; basal breccia; and metamorphosed sediments. The younger Firstbrook member consists of: arenite, wacky, arkose, shaley mudstone, siltstone, claystone; tectonically brecciated and sheared sediments; and metamorphosed sediments. (Born 1989). The Lorrain Formation, which conformably overlies the Gowganda Formation, consists mainly of: arkose, minor feldspathic lithwacke, micaceous lithic arkose; fine-grained micaceous arkose interbedded in coarse-grained lithic arkose; thin mudstone, siltstone interbeds in arkose; metamorphosed sediments; and feldspathic quartzite (Born 1989). Intruding the Huronian Supergroup are Paleoproterozoic swarms of Nipissing Diabase dikes and sills (2219 Ma). Such rocks consist of quartz diabase, varied textured diabase, leucocratic quartz gabbro, diorite rock types and related granophyre rock types (Born 1989; Ontario Geological Survey 1991). The Nipissing Diabase is thought to have been one of the

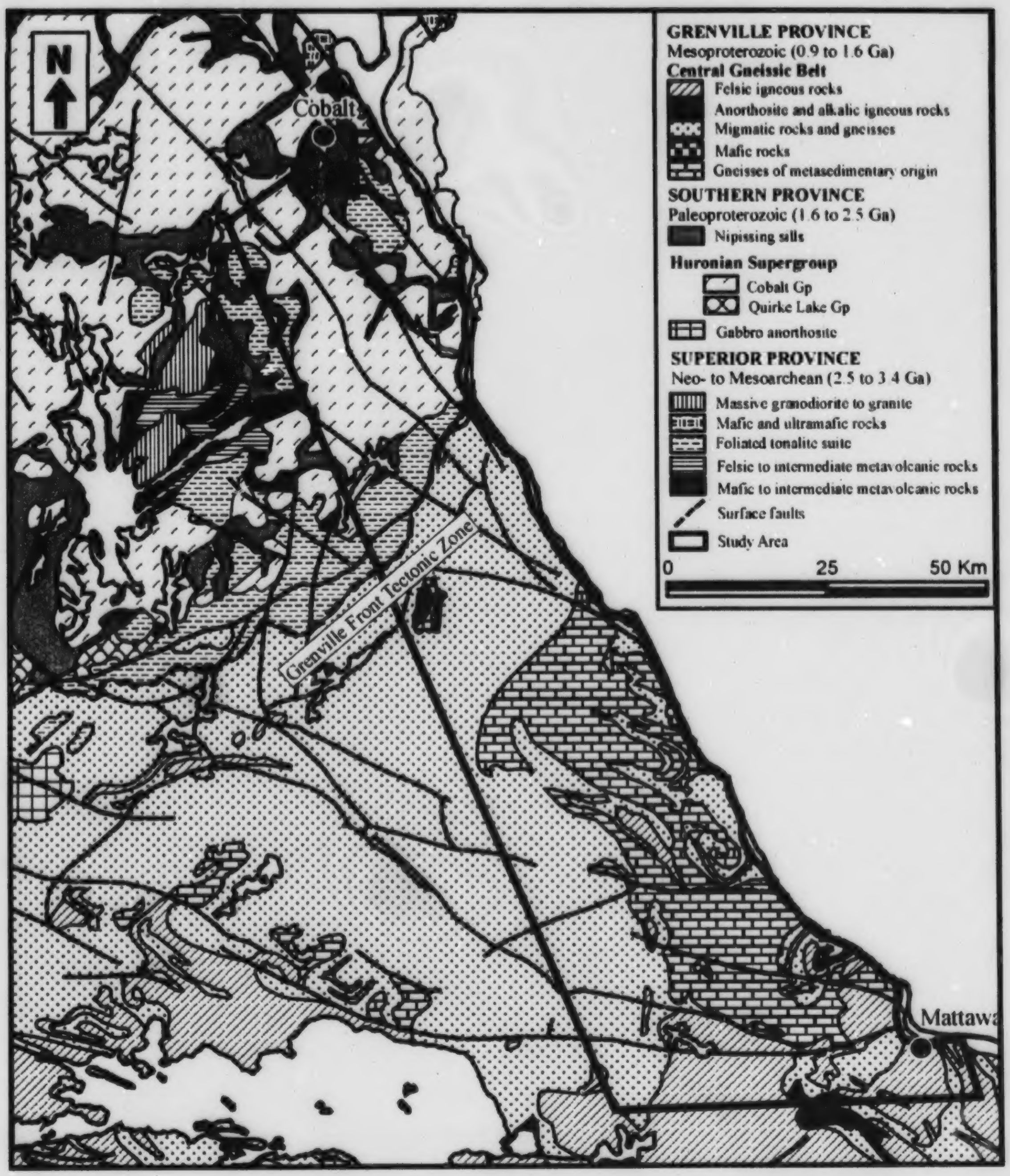
N
Cobalt
Grenville Front Tectonic Zone
Mattawa
GRENVILLE PROVINCE
Mesoproterozoic (0.9 to 1.6 Ga)
Central Gneissic Belt
Felsic igneous rocks
Anorthosite and alkalic igneous rocks
Migmatic rocks and gneisses
Mafic rocks
Gneisses of metasedimentary origin
SOUTHERN PROVINCE
Paleoproterozoic (1.6 to 2.5 Ga)
Nipissing sills
Huronian Supergroup
Cobalt Gp
Quirke Lake Gp
Gabbro anorthosite
SUPERIOR PROVINCE
Neo- to Mesoarchean (2.5 to 3.4 Ga)
Massive granodiorite to granite
Mafic and ultramafic rocks
Foliated tonalite suite
Felsic to intermediate metavolcanic rocks
Mafic to intermediate metavolcanic rocks
Surface faults
Study Area
0
25
50 Km

Figure 5: Bedrock geology of the study area (after Ontario Geological Survey 1991).

important factors associated with the emplacement of the silver-cobalt veins of South Lorrain Township. A series of Mesoproterozoic (0.9 to 1.6 Ga) northwest-trending coarse- and fine-grained olivine diabase dikes were emplaced next and are known as the Sudbury Swarm (Born 1989; Ontario Geological Survey 1991).

The Grenville Province occupies the southern part of the study area and comprises Mesoproterozoic aged rocks (0.9 to 1.6 Ga.) belonging to the Central Gneissic Belt (Figure 5). The rock suites of the Grenville Province found in the study area include: 1) felsic igneous rocks, composed of tonalite, granodiorite, monzonite, granite, syenite and their derived gneisses; 2) anorthosite and alkalic igneous rocks, such as anorthositic gabbro, gabbro and related gneisses, nepheline syenite and alkalic syenite; 3) migmatitic rocks and gneisses of undetermined protolith, including layered biotite gneisses and migmatites and locally quartzofeldspathic-, ortho- and paragneisses; 4) mafic rocks, including amphibolite, gabbro, diorite and mafic gneisses; and 5) gneisses of metasedimentary origin, such as quartzofeldspathic gneisses, pelitic gneisses, calc-silicate gneisses, minor quartzite, minor marble and marble breccia (Ontario Geological Survey 1991).

FAULTS AND LINEAMENTS

The most significant structure within the study area is the Lake Temiskaming Structural Zone (LTSZ). The LTSZ is a branch of the Ottawa-Bonnechere Graben system that joins with the St. Lawrence rift system near Ottawa (Sage 1996). The Ottawa-Bonnechere Graben splits into 2 branches at Lake Nipissing, near North Bay. The LTSZ extends northwestward from this junction and the second zone of deformation trends westerly toward Sudbury. The St. Lawrence Graben system, which includes the LTSZ, has been related to the opening of the Atlantic Ocean (Sage 1996). The LTSZ is defined as a rift valley centered on Lake Temiskaming (Lovell and Caine 1970). The western flank of the LTSZ lies close to the northern part of the study area (Figure 4; Figure 5).

A number of faults associated with the LTSZ, including the Net Lake, South Montreal River, McKenzie and Cross Lake faults cross the study area (Figure 6) (Lovell and Caine 1970). These faults strike northwest at approximately 325° and are therefore orthogonal to the northeast striking Grenville Front deformation zone (Sage 2000). In addition, numerous northwest trending lineaments observed in the study area are believed to be related to fracturing associated with the LTSZ (Allan 2001). The emplacement of Nipissing diabase and Sudbury swarm dikes is believed to have occurred along these lineaments which predate the intrusions (Born 1989; Johnston 1954). Northeast trending fracture systems are evident in the study area. These systems are illustrated by the Grenville Front Tectonic Zone and demonstrated by the orientation of the northeast arm of Lake Temagami and Rabbit Lake. The intersection of the northwest and northeast trending structures provides potential settings for kimberlite emplacement. The Ottawa-Bonnechere Graben system and its LTSZ branch remain seismically active (Sage 2000).

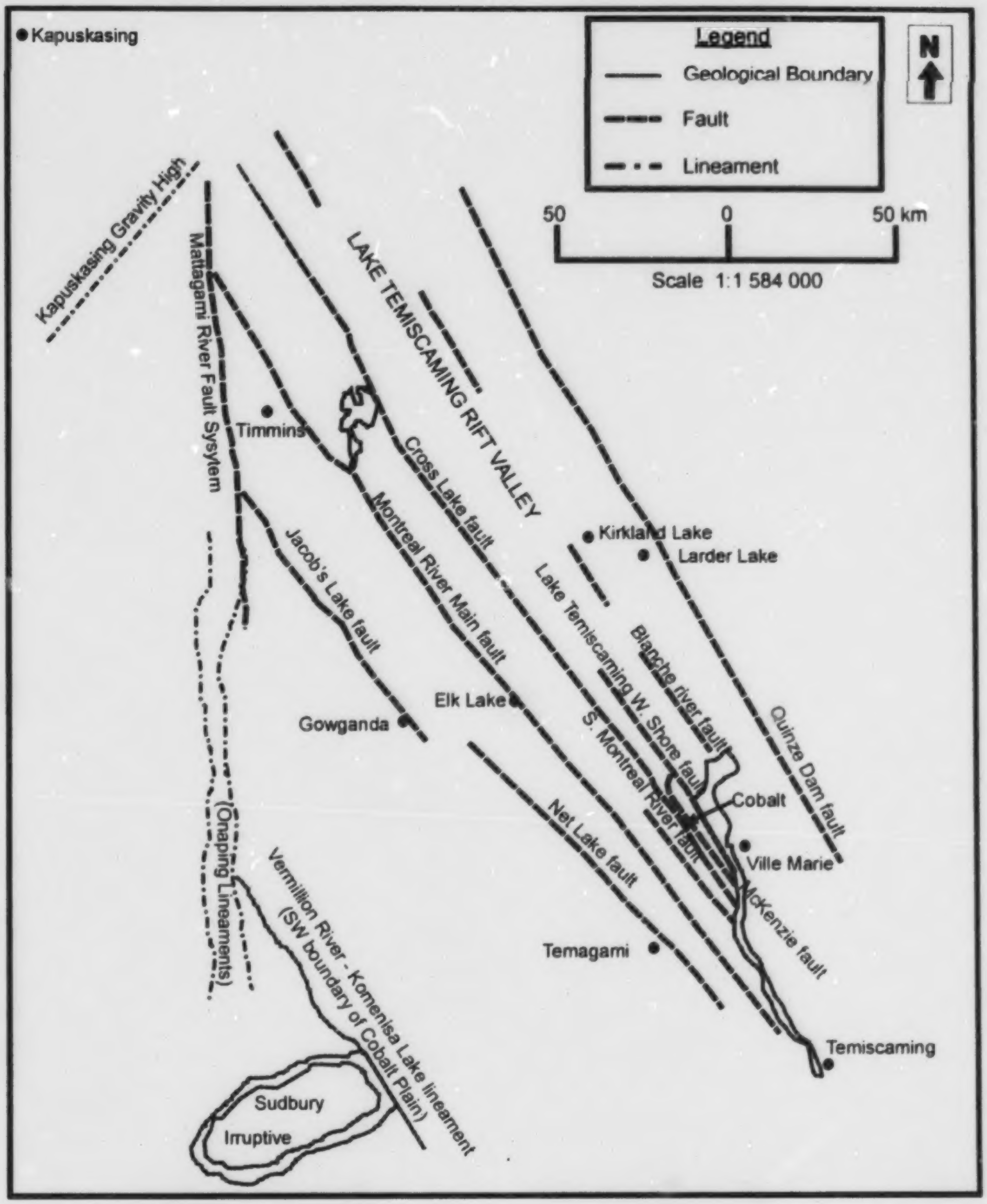

Figure 6: The Lake Temiskaming Rift Valley (also known as the Lake Temiskaming Structural Zone) (after Lovell and Caine 1970).

QUATERNARY GEOLOGY

During the Wisconsin Episode of the Pleistocene Epoch the study area was occupied by the Labrador Sector of the Laurentide Ice Sheet. Ice accumulation of the Labrador Sector began in the interior uplands of Labrador and Quebec. In general, the ice sheet advanced south to southwestward across the study area (Barnett 1992). On the basis of glacial striae orientations in the Temiskaming area, it has been proposed that 3 different stages of ice flow affected the region. The oldest, a west-southwest flow (230° to 270°) was likely associated with the main phase of the Laurentide ice sheet. During deglaciation, ice flow shifted to the south-southwest (180° to 220°). During final deglaciation of the area, local ice tongues from the main ice sheet occupied the structural depressions of the Montreal River and Lake Temiskaming basins, giving rise to ice flow towards the southeast, shaping the present landscape for all of the region west of the Harricana Moraine (Figure 7). The main carriers of glacial debris were the two oldest ice flows (McClenaghan et al. 2001; Veillette 1986). Striae observed during the course of the present study ranged from 180° to 230° and are thought to be related to the widespread south-southwest flow noted by Veillette 1986.

The surficial deposits observed in the region (Figure 8) are thought to have been deposited primarily during the latter part of the Wisconsin Episode. Advance of glacial ice across the area deposited a discontinuous veneer of undifferentiated, sandy to silty till, with a general lack of carbonates, over bedrock (Gartner 1980). This till is poorly sorted, unstratified, has a sandy to silty matrix and a high content of pebbles, cobbles and boulders. The clasts reflect the composition of the underlying bedrock (Boissonneau 1968). During deglaciation, approximately 10 000 years BP at the beginning of the Holocene, glacial Lake Barlow began to form in the valleys of the eastern part of the area as drainage along the valley now occupied by Lake Temiskaming was blocked. By 9 500 years BP, the ice front had receded well to the north of the study area and Lake Barlow joined with Lake Ojibway to form Lake Barlow-Ojibway. Approximately 8 700 years BP, the obstructions along the Lake Temiskaming valley were breached and Lake Barlow-Ojibway drained in several stages resulting in modern Lake Temiskaming (Roed 1979).

Across northeastern Ontario several east-trending moraines were deposited at the margin of the receding ice front (Gartner 1980). A major recessional moraine, known as the McConnell Lake Moraine, and several associated kame moraines were deposited when the ice front halted at the south end of Lake Temiskaming (Boissonneau 1968). Other remnants of glaciofluvial activity associated with retreat of the ice front from the area include: 1) glaciolacustrine deposits of sand and gravel; nearshore and beach deposits; 2) glaciolacustrine deposits of silt and clay, minor sand; basin and quiet water deposits; 3) glaciofluvial outwash deposits of gravel and sand; and 4) glaciofluvial ice-contact deposits of gravel and sand, minor till, eskers and end moraines (Barnett et al. 1991).

Recent swamp, lake and stream deposits as well as organic deposits of peat, muck and marl can be found throughout the survey area (McIlwaine 1970; Barnett et al. 1991).

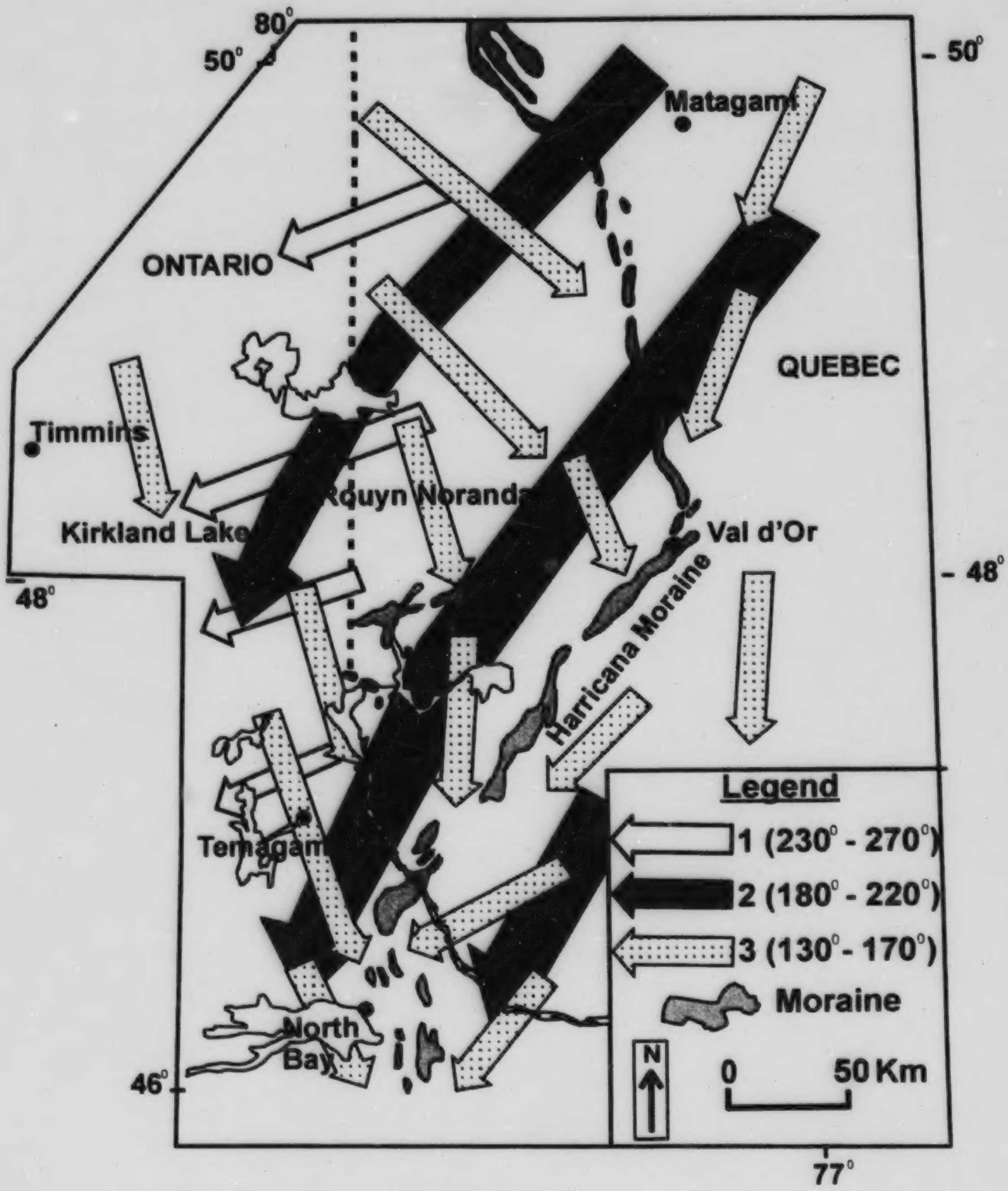

Figure 7: Ice flow movement in the Abitibi-Temiskaming area. The oldest ice flow event is the number 1 movement, the youngest the number 3 movement (after Veillette 1986).

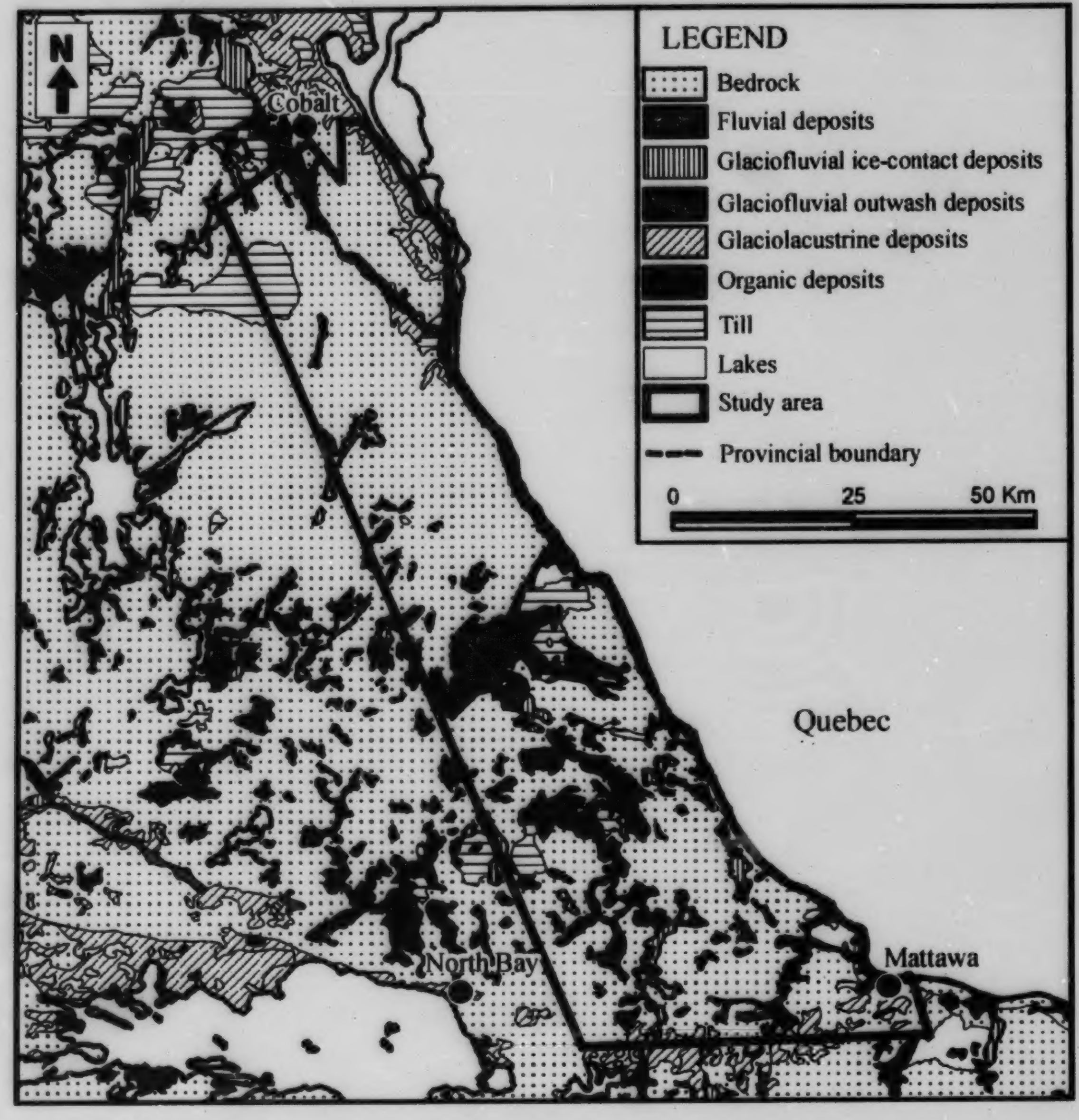

Figure 8: Quaternary geology of the study area (after Barnett et al. 1991).

SAMPLING METHODOLOGY

The current regional modern alluvium survey, covering a total area of approximately 3825 km^2, was conducted in June, July and August 2001. A total of 254 modern alluvium samples (01-JR-MA series), 8 till (01-JR-TM series), 1 beach deposit (01-JR-BD series) and 14 glaciofluvial sand and gravel (01-JR-SG series) samples were collected. Access to sample locations was achieved by truck, all terrain vehicles (ATV), boat, helicopter and float plane. As a result, the distribution of samples provides excellent regional coverage (Figure 3-back pocket). Regional overburden heavy mineral surveys provide data on the types, distribution and relative concentration of heavy minerals in a given region. The focus of the 2001 sampling program was to provide regional information on kimberlite indicator minerals and MMSIMs in the area. The number of samples collected was predetermined by budget and time considerations. Samples were collected over as broad an area as possible. The position of each sample was accurately recorded with a Geographic Positioning System (GPS) instrument set to North American Datum (NAD) 83 and using NTS 1:50 000 scale map sheets situated in UTM zone 17. Sample numbers and locations (in UTM coordinates) are summarized in Appendix A (this report and MRD 102).

Because of text plotting parameters on Figure 3, the backpocket map, the glacial sand and gravel samples are labelled as the 1000 series, the till samples are labelled as the 2000 series and the beach sample is labelled as the 3000 series.

Modern alluvium was chosen as the primary sampling media for this study as it is commonly used as a means of gaining a fast, relatively inexpensive heavy mineral signature for individual drainage basins. The primary objective of a regional scale survey is to isolate anomalies that may indicate the presence of mineral deposits in the catchment area or possibly beyond. The heavy mineral signature obtained from modern alluvium is a product of the erosion of both bedrock and overburden, and the subsequent transportation and deposition of the eroded material (Morris et al. 2000). Stream sediments are characterized by variable composition, grain size, sorting and colour, all of which are a function of geology, terrain and climate of the catchment area sampled by the stream (Meyer et al. 1979). It is important to note, however, that lakes within drainage basins act as sediment traps, restricting the down drainage transport of heavy minerals. Therefore, when modern alluvium sample sites were chosen for this survey, an attempt was made to maximize the length of stream section between the sample site and a lake. This maximizes the area of drainage basin sampled by the stream (Morris et al. 2000).

Points of heavy mineral deposition within streams were targeted for sample collection. These points include: the deepest part of the channel; longitudinal and point bars (Figure 9); and boulder, log and vegetation traps. For both the modern alluvium and glaciofluvial samples, material was sieved in the field using a 5 mm mesh screen and the finer fraction (<5 mm) was retained. Sample weight ranged from 10 to 20 kg. Larger samples were collected at some sites to compensate for the high percentage of fine-sand or silt material in the sediment or for the dilution of heavy mineral grains by the high percentage of organic material found in streams within the area. The <5 mm fraction of the sample was sent for heavy mineral processing to separate possible kimberlite and other indicator minerals. Where possible approximately 50 pebbles were collected from the coarser (>5 mm) fraction at each sample site for pebble lithology classification. At each site a small portion of the stream sediment was panned and the resultant "fine-fraction" concentrate kept.

Till samples were collected from lodgement, or subglacially deposited till deposits. Lodgement till consists mainly of locally derived material and is ideal for till sampling programs (Morris et al. 2000). At each till sample site a 200 g sample was collected of "C" horizon material. In addition, a 10 kg till "C" horizon sample and a pebble sample were collected. The 10 kg sample was sieved through a 5 mm mesh screen to exclude the coarser material. The 200 g samples of "C" horizon material were submitted for inductively coupled plasma (ICP) multi-element geochemical analysis and atomic emission spectroscopy analysis as well as PGE analysis by fire assay with an ICP-MS finish. The 10 kg till "C" horizon samples were submitted for heavy mineral concentration and subsequent heavy mineral analysis by visual examination and electron microprobe determination.

At each sample location a site description consisting of observations on: a) genesis of material, stream flow and depth; b) surface expression; c) slope inclination and aspect; d) drainage; e) vegetation type and state; f) glacial features; g) anthropogenic factors; h) material description consisting of: i) texture; ii) structure; iii) bar form; iv) clast abundance, size, shape, type; and e) diagrams and additional comments, was completed. In addition, at till sampling sites, the following observations were made: a) material thickness; and b) material description consisting of : i) horizon; ii) colour; iii) consistency; iv) plasticity; and v) lower horizon boundary distinctiveness and form. Photographs were taken at several of the sites.

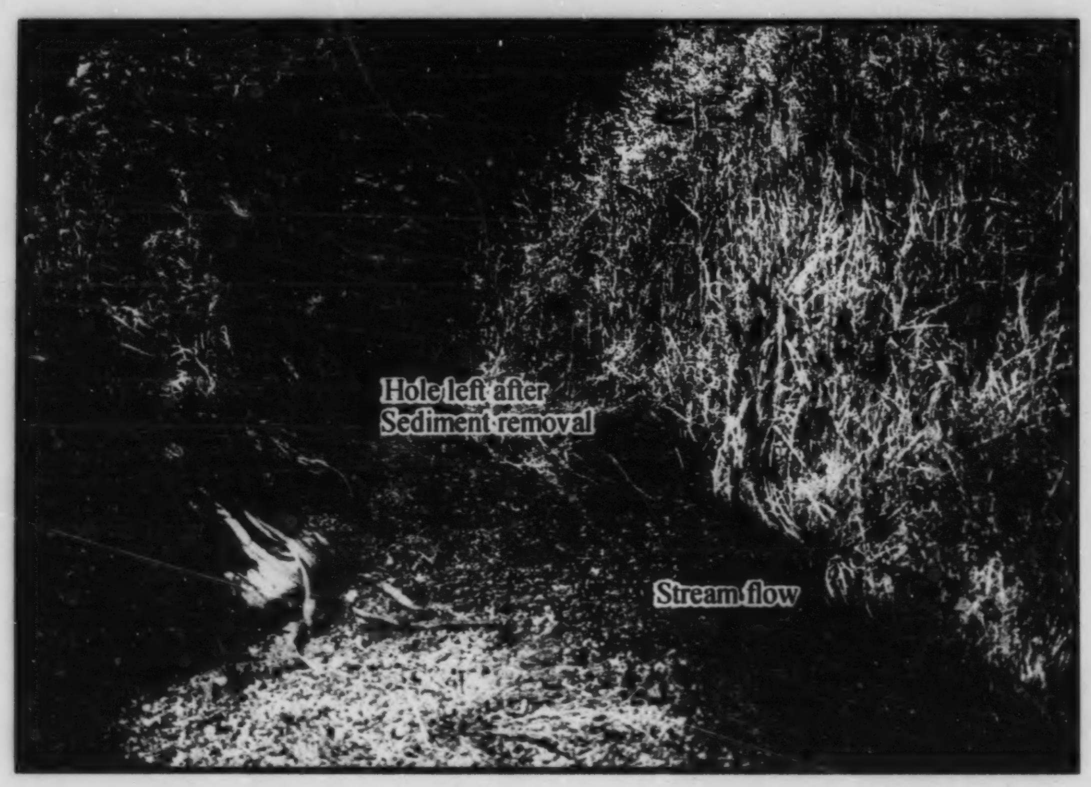

Figure 9: Photograph of sample site 78. This site illustrates an ideal environment to sample, the upstream end of a gravelly point bar deposited on a stream meander.

PEBBLE LITHOLOGY

Pebble lithology was determined by comparing the physical properties of pebbles to the local bedrock types. Pebble lithology studies provide a useful tool in determining whether the sediment in a stream is derived from a local or distal source. Pebbles similar to the bedrock types in the vicinity of the stream sample location indicate proximity to source. Exotic pebbles, those derived from bedrock located outside of the drainage basin sampled, indicate that transport has occurred over greater distances. In the fluvial (stream) environment, pebble shape may also reflect distance to source. An abundance of angular pebbles suggests local derivation, whereas a population of well-rounded pebbles may indicate longer transportation distances. However, the mineralogy of the pebble's rock type must be considered when using this approach as some easily weathered minerals may be quickly abraded in a stream environment. The resultant pebble may be rounded despite local derivation. Pebble lithologies identified in this survey include: felsic and mafic intrusives, gneiss, felsic and mafic metavolcanics, sedimentary, quartz and others. The pebble lithology classification from this survey is summarized in Appendix J.

HEAVY MINERAL RECOVERY AND IDENTIFCATION

All samples were sent for heavy mineral processing to isolate KIMs, MMSIMs and gold grains. Initially, weighed samples were wet sieved at 2 mm. The >2 mm fraction was stored and the <2 mm fraction was passed over a shaking table to remove light (low specific gravity) material and to obtain a preliminary gold grain count. The table concentrate was panned and a secondary gold grain count performed. Heavy liquid separation (methylene iodide, specific gravity 3.2) was used to further concentrate heavy minerals. The heavy mineral concentrate then underwent ferromagnetic separation to obtain magnetic and nonmagnetic fractions. A series of various sieving and washing processes and additional magnetic separations were carried out to obtain the final concentrates for indicator mineral picking (Figure 10). Sample processing data is presented in Reid (2002, MRD, Appendix B). The isolated KIM and MMSIM grains were sent to the Ontario Geoscience Laboratories in Sudbury, Ontario to determine, through microprobe analysis, the precise composition of critical indicator minerals. Prior to mounting and polishing the grains for microprobe analysis, 21% of the garnet grains had their shape recorded by photographing them on the scanning electron microprobe.

During the picking process 6 types of KIMs were isolated: Cr-pyrope garnets; eclogitic garnets; Cr-poor megacrystic garnets; chromite; Cr-diopside; Mg-ilmenite and forsteritic olivine. All identified grains were sent for microprobe analysis. The picking results for these minerals are outlined in Appendix C. Microprobe analyses are summarized in Appendix E and MRD 102.

A summary of recovered gold grains is listed in MRD 102, Appendix F. Grains were classified by physical appearance into pristine, modified and reshaped categories. Additionally, estimated gold concentrations in parts per billion (ppb) were calculated for each category and in total per sample.

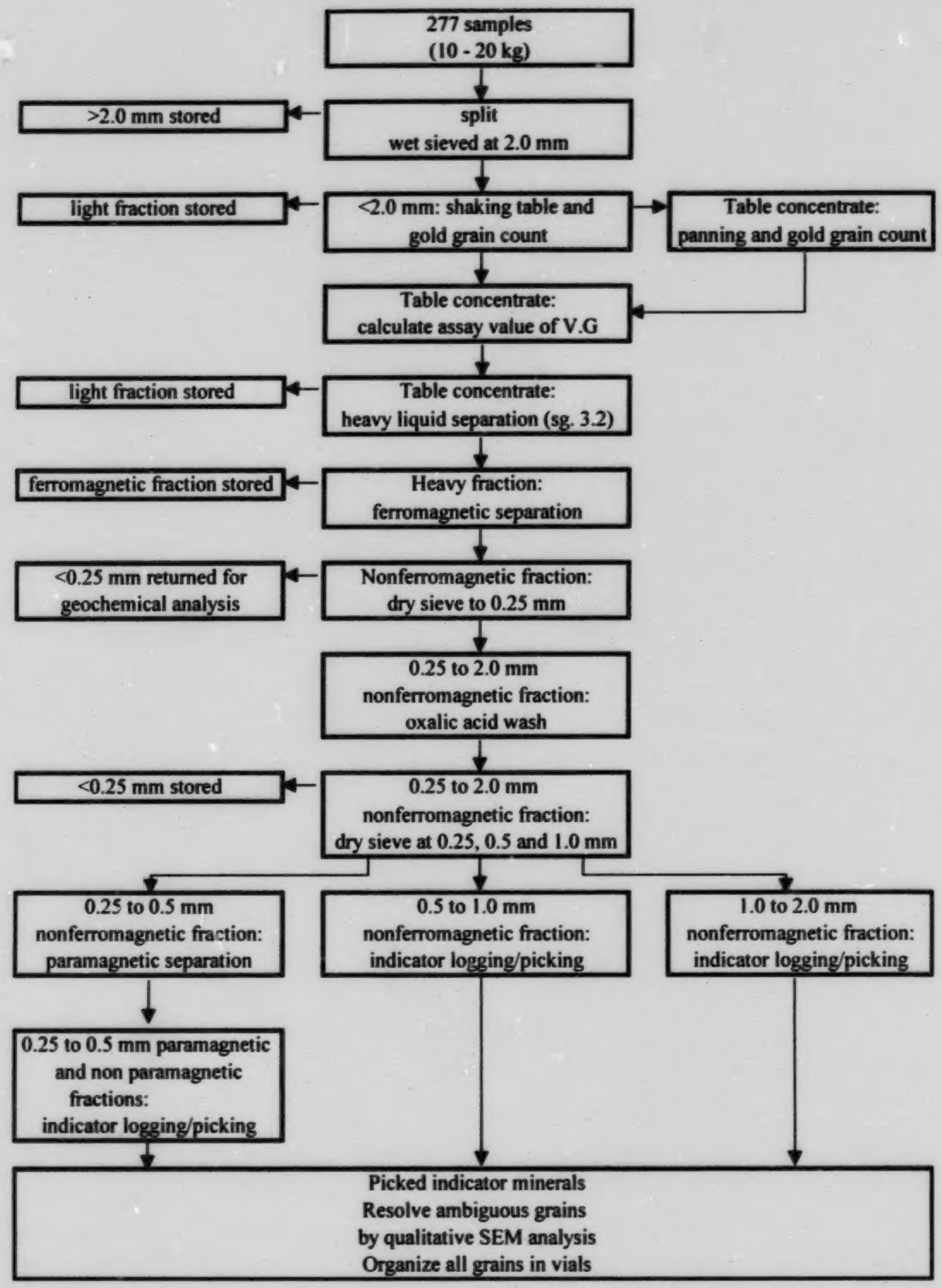
277 samples
(10 - 20 kg)
split
wet sieved at 2.0 mm
>2.0 mm stored
<2.0 mm: shaking table and
gold grain count
light fraction stored
Table concentrate:
panning and gold grain count
Table concentrate:
calculate assay value of V.G
Table concentrate:
heavy liquid separation (sg. 3.2)
light fraction stored
Heavy fraction:
ferromagnetic separation
ferromagnetic fraction stored
Nonferromagnetic fraction:
dry sieve to 0.25 mm
<0.25 mm returned for
geochemical analysis
0.25 to 2.0 mm
nonferromagnetic fraction:
oxalic acid wash
0.25 to 2.0 mm
nonferromagnetic fraction:
dry sieve at 0.25, 0.5 and 1.0 mm
<0.25 mm stored
0.25 to 0.5 mm
nonferromagnetic fraction:
paramagnetic separation
0.5 to 1.0 mm
nonferromagnetic fraction:
indicator logging/picking
1.0 to 2.0 mm
nonferromagnetic fraction:
indicator logging/picking
0.25 to 0.5 mm paramagnetic
and non paramagnetic
fractions:
indicator logging/picking
Picked indicator minerals
Resolve ambiguous grains
by qualitative SEM analysis
Organize all grains in vials

Figure 10: Heavy mineral concentrate process flowchart (after Averill 2001).

Heavy mineral processing also recovered several types of MMSIMs . These include: chalcopyrite; pyrite; molybdenite; goethite; spinel (gahnite); corundum; Mn-epidote; Cr-grossular; low Cr-diopside; red rutile; kyanite; staurolite; spessartine; uvarovite; sillimanite; orthopyroxene; fayalite; forsteritic olivine; and chromite. Results are summarized in Appendix I and MRD 102. Only spinel, rutile, corundum, gahnite, low Cr-diopside, staurolite and chromite grains were sent for microprobe analysis.

ESTIMATION OF GRAIN NUMBERS AND DATA NORMALIZATION

Two different calculations were used on the data to normalize the results. The first involved normalizing the picked estimates of indicator minerals. For samples that contain large numbers of indicator minerals, it is neither time efficient nor cost effective to precisely count the absolute number of grains or pick the total number of grains of an abundant mineral that is present in that sample. Therefore, a representative subset of the grains is picked and an estimate of the number of grains present is made. After the isolated grains were analysed by the microprobe and their compositions confirmed, the picking estimates were normalized based on the amount of grains verified to be kimberlitic. For example, sample number 73 was estimated to contain 74 chromites where 44 were picked and sent for microprobe analysis. Analysis revealed that 31 of the 44 chromites were, in fact, kimberlitic. Therefore after normalization the sample was considered to contain 52 chromites.

The second process involved normalizing the number of confirmed kimberlitic grains to the table feed weight. The average sample weight was 8 kg, therefore grain counts were normalized to this weight. For instance, sample number 73 contained 31 confirmed kimberlitic chromites. After normalizing to a table feed weight of 8 kg for a sample with a table feed weight of 5.4 kg, the sample was considered to contain 46 chromites. However, these values were not used to determine anomalous sites, as this process does not compensate for the fact that individual sample sites may have very different particle size distributions. Since KIMs and MMSIMs tend to be concentrated in the 0.25 to 0.5 mm size fraction, it follows that any form of normalization should consider sample-to-sample differences on the basis of critical particle size fractions and not table feed weight. However, such a correction of raw data cannot account for preferential concentration of indicator minerals at some sample sites. Normalization is therefore not recommended except for unusual circumstances where abnormally high numbers of indicator minerals were present and only a select number of grains were picked from an estimated total number of grains (i.e. picked estimate normalization).

All normalized data and sample calculations are listed in Appendix K (this report and MRD 102).

GEOCHEMICAL ANALYSIS, RESULTS AND INTERPRETATION

KIMBERLITE INDICATOR MINERALS

Despite the number of potential bedrock settings for natural diamond occurrences, kimberlite has historically been regarded as the only significant primary host rock for diamonds (Helmstaedt 1993). The volcanic host rocks for diamonds, however, merely represent the agents to transport diamonds from the upper mantle to the surface. Kimberlite magmas must form at extreme depths (in excess of 150 km) in order to tap the diamondiferous portions of the sub-cratonic lithosphere (Ontario Geological Survey 2001). The proven diamond source rocks are various types of peridotite and certain high pressure eclogites. Three types of peridotitic paragenesis are evident and are listed in order of relative importance with respect to diamond potential: garnet harzburgite; chromite harzburgite; and garnet lherzolite (Gurney 1984). The transportation and subsequent disaggregation of these source rocks by kimberlite during the eruption process is the mechanism by which both diamonds and associated indicator minerals become liberated from their mantle host rocks.

The indicator mineral approach to kimberlite exploration relies on the recognition of distinctive mineral suites that are associated with potentially diamondiferous source rocks. Since these minerals are far more abundant than coexisting diamonds in the mantle environment and since kimberlite weathers quickly in the secondary environment, exploration programs focus on the recovery of indicator minerals rather than diamonds. The compositions of certain key indicator minerals, namely garnet, chromite, chrome diopside, olivine and ilmenite, have been used in diamond exploration to permit an assessment of diamond potential (Fipke et al. 1995).

Garnet

Garnet grains analyzed in this study include Cr-pyrope, pyrope, almandine, andradite, spessartine and grossular. Garnets in kimberlites can be derived from various sources including peridotites, eclogites, Cr-poor megacrysts and crustal rocks. Garnets of peridotite origin are typically Cr-rich pyropes and can originate from 5 different types of peridotite, the 2 most important being harzburgite and lherzolite. Eighty-five percent of Cr-pyrope that occur as inclusions in diamonds are Ca-depleted, Cr-enriched and harzburgitic in origin (Gurney 1984). These types of garnets have been termed "G10" garnets (Dawson and Stephens 1975). Eclogitic and megacrystic garnets are also of primary interest as they are indicative of upper mantle derived material (Allen 2001). Megacrysts are thought to be phenocrysts in the kimberlite that formed at depths of 150 to 200 km. Therefore, they have no genetic connection with diamonds, which are xenocrysts in the kimberlite, but their presence in a pipe helps in ascertaining if that kimberlite has sampled a sufficiently thick lithospheric mantle keel to be potentially diamondiferous (Schulze 1999; Fipke et al. 1995).

Garnets recovered from modern alluvium sampling in this study were classified on the basis of a combination of geochemical parameters including % wt. of Cr_2O_3, TiO_2, Na_2O, FeO, CaO and MnO. Peridotitic garnets are distinguished from eclogitic and crustal garnets in terms of Cr_2O_3 % wt. Eclogitic garnets are typically Cr-poor whereas harzburgite and lherzolite garnets are Cr-rich, in general, displaying concentrations of Cr_2O_3 greater than 2%. These can be further subdivided into G9 and G10 classifications based on CaO concentration. On a CaO/ Cr_2O_3 plot, 85% of diamond inclusion garnets fall on the Ca-enriched side of a diagonal line that parallels the lherzolite trend. This 'diamond in' line (based on studies of South African diamondiferous kimberlites) separates G10 (Ca-depleted) garnets to the left and G9 garnets to the right. Given that garnet harzburgite has greater diamond potential than garnet lherzolite, G10 garnets with compositions that scatter well across the sub-calcic field are the most important garnet indicators recovered in an exploration program (Gurney and Zweistra 1995). Very high diamond potential is indicated by G10s that are <2.5 wt % CaO and >6 wt % Cr_2O_3 (Fipke et al. 1995). Additionally, peridotitic garnets can be classified according to a J-factor scale (Lee 1993). On a CaO/Cr_2O_3 plot, the areas defining G9 and G10 garnets have been subdivided into 10 zones that rate diamond potential from J1 to J10 where J10 represents a highly Cr-enriched, Ca-depleted G10 garnet.

Eclogitic garnets have Cr_2O_3 concentrations <2 wt % and can be isolated from crustal garnets and Cr-poor megacrysts on the basis of FeO, MnO and TiO_2 content. The first step is to screen out crustal garnets on the basis of FeO concentration where the FeO content of eclogitic garnets is <22 wt %. Care must be taken to exclude spessartine and grossular garnets from the data as they will tend to plot with the eclogites at this stage. These grains can be screened on the basis of MnO (typically >1%) and CaO (typically >15%) (Ontario Geological Survey 2001). After eclogitic garnets have been isolated, the classification of group I and group II eclogites and compositional overlap with megacryst garnets can be carried out using a plot of Na_2O vs. TiO_2 (Schulze 1999). Generally, only group I eclogites are considered diamond bearing. Garnets from these eclogites have a content of Na_2O > 0.07 wt %, indicating equilibrium at high pressures compatible with diamond stability (Schulze 1999; Fipke et al. 1995). Group II eclogites are Ti- and Na-depleted. Megacrystic garnets also have Na_2O concentrations of <0.07 wt %, however, on this particular plot, they are also TiO_2 enriched, with concentrations of TiO_2 > 0.4 wt % (Schulze 1999).

A total of 896 garnets were recovered from heavy mineral processing and sent for microprobe analysis. Precise geochemical classification determined the following distinctions: 15 G10 pyropes, 660 G9 pyropes, 1 Group I eclogitic garnet (ECL), 35 Group II eclogitic garnets (ECLs), 99 Cr-poor megacrysts, 61 crustal garnets, 13 grossular garnets, 8 uvarovites and 4 andradites. Figure 11 shows the distribution of all compositional data on the lherzolite/harzburgite discriminant plot. An expanded view of the G10 garnet field with labelled sample numbers is summarized in Figure 12. A J-factor classification of all garnets (Figure 13) shows that most of the G10 grains scatter throughout the J5 field, but 2 grains do plot in the J6 and J7 fields.

Chemical compositions of different garnet types are compared on the graphs illustrating the classification process; G9 and megacrystic garnets on a Cr_2O_3/TiO_2 plot (Figure14); eclogitic and crustal garnets on a FeO/ TiO_2 plot (Figure 15); eclogitic and crustal garnets on a FeO/MnO plot (Figure 16); Group I and Group II eclogitic garnets and megacrysts on a Na_2O/TiO_2 plot (Figure 17) and eclogitic and megacrystic garnets on a Na_2O/CaO plot (Figure 18).

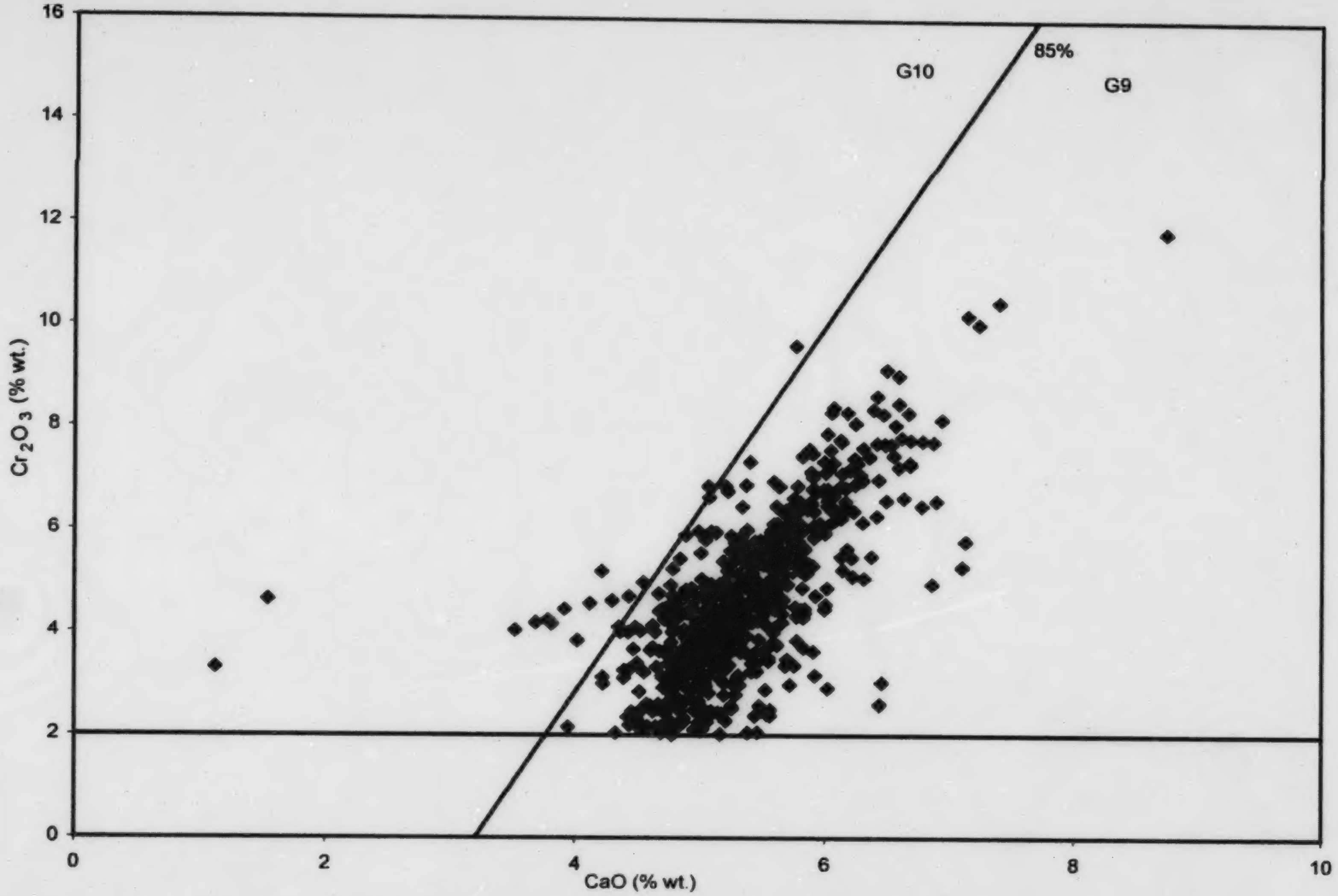

Figure 11: CaO/Cr_2O_3 plot of all garnets recovered from the study area. For G10 sample labels, refer to Figure 12 which displays an expanded view of the field (after Dawson and Stephens 1975).

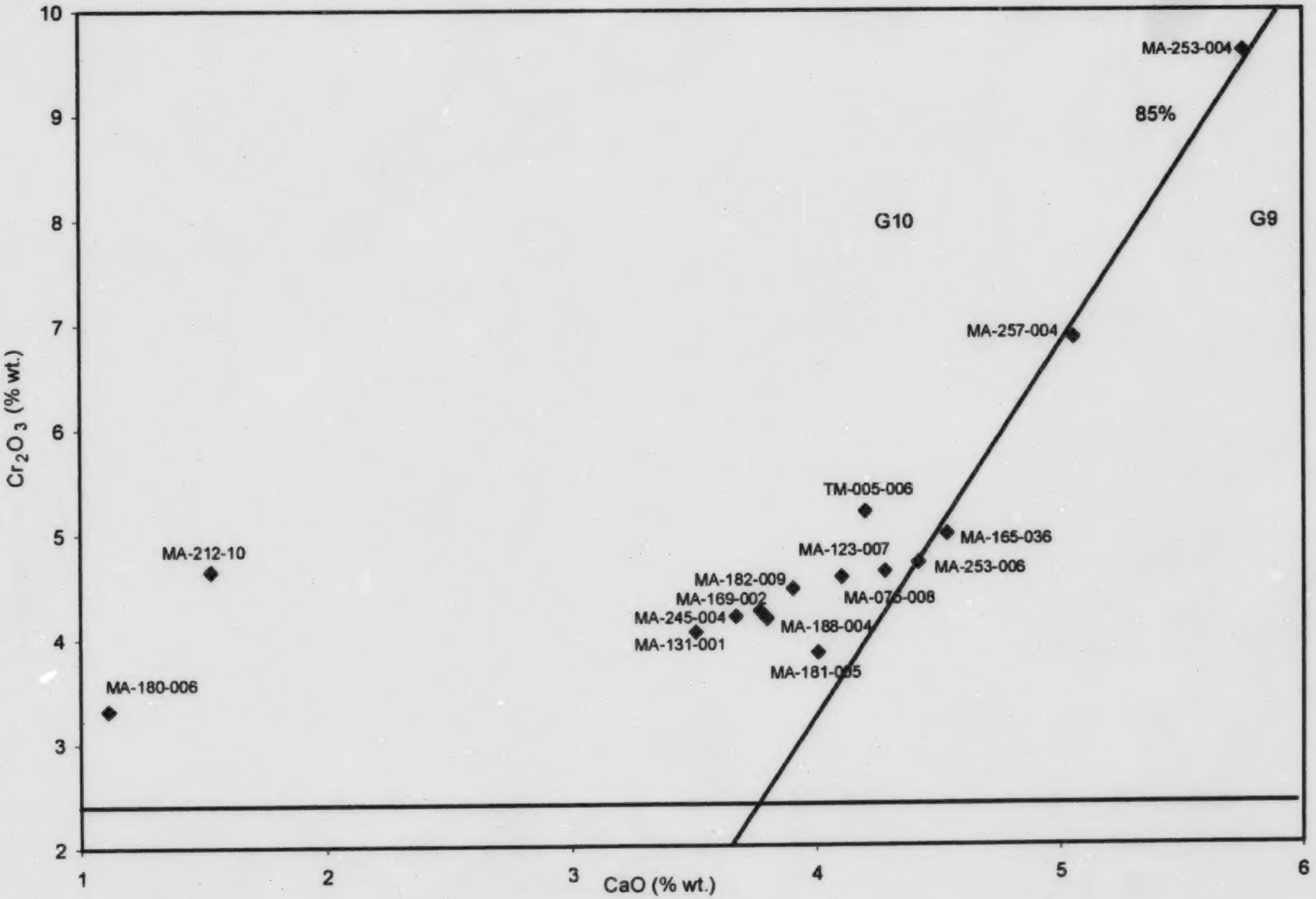

Figure 12: Expanded view of G10 garnet field showing sample labels.

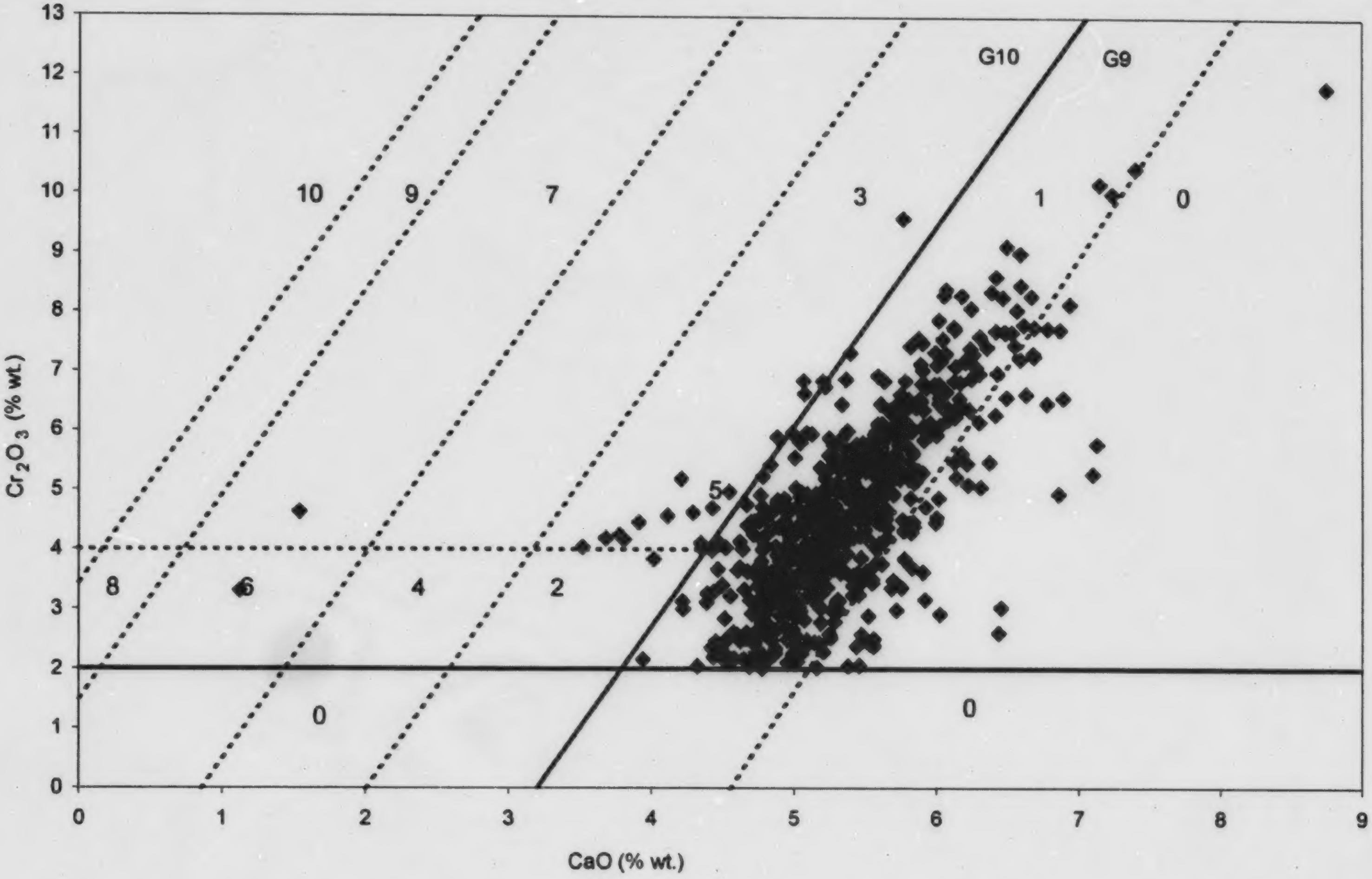

Figure 13: J-factor classification of all garnets (after Lee 1993).

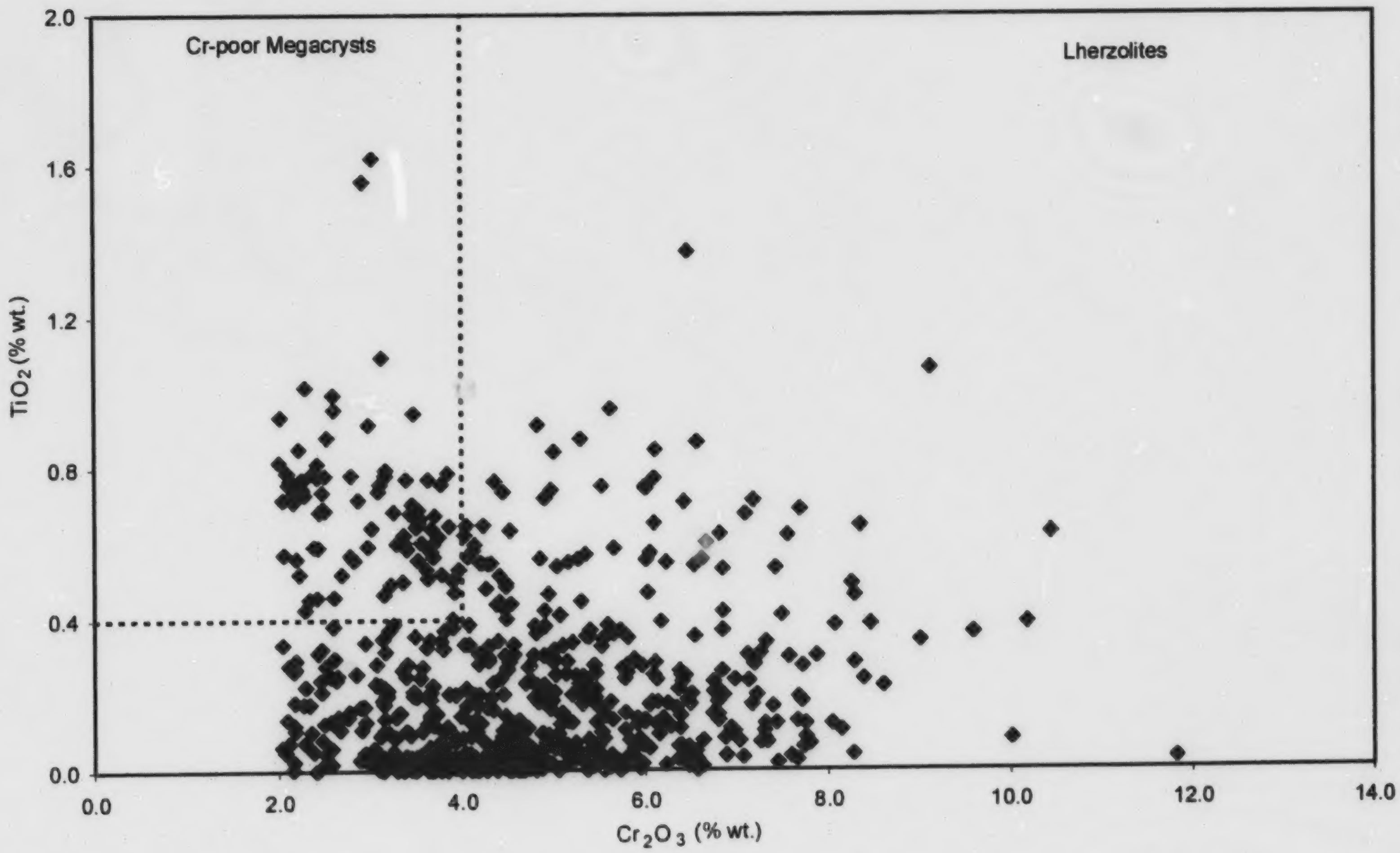

Figure 14: Cr_2O_3/TiO_2 plot showing lherzolitic garnets and Cr-poor megacrysts from the study area (after Schulze 1999).

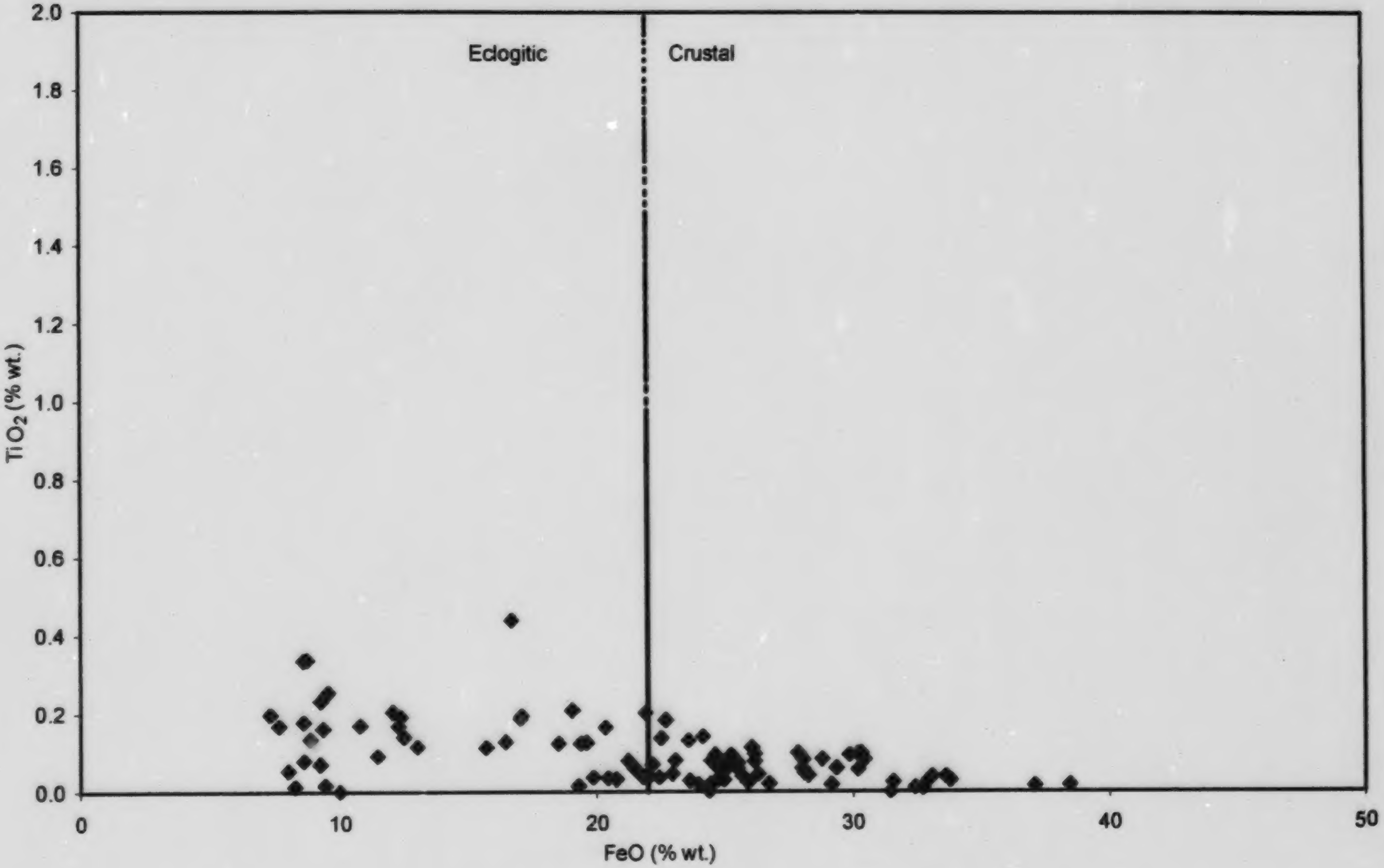

Figure 15: FeO/TiO_2 plot showing eclogitic and crustal garnets from the study area (after Schulze 1999).

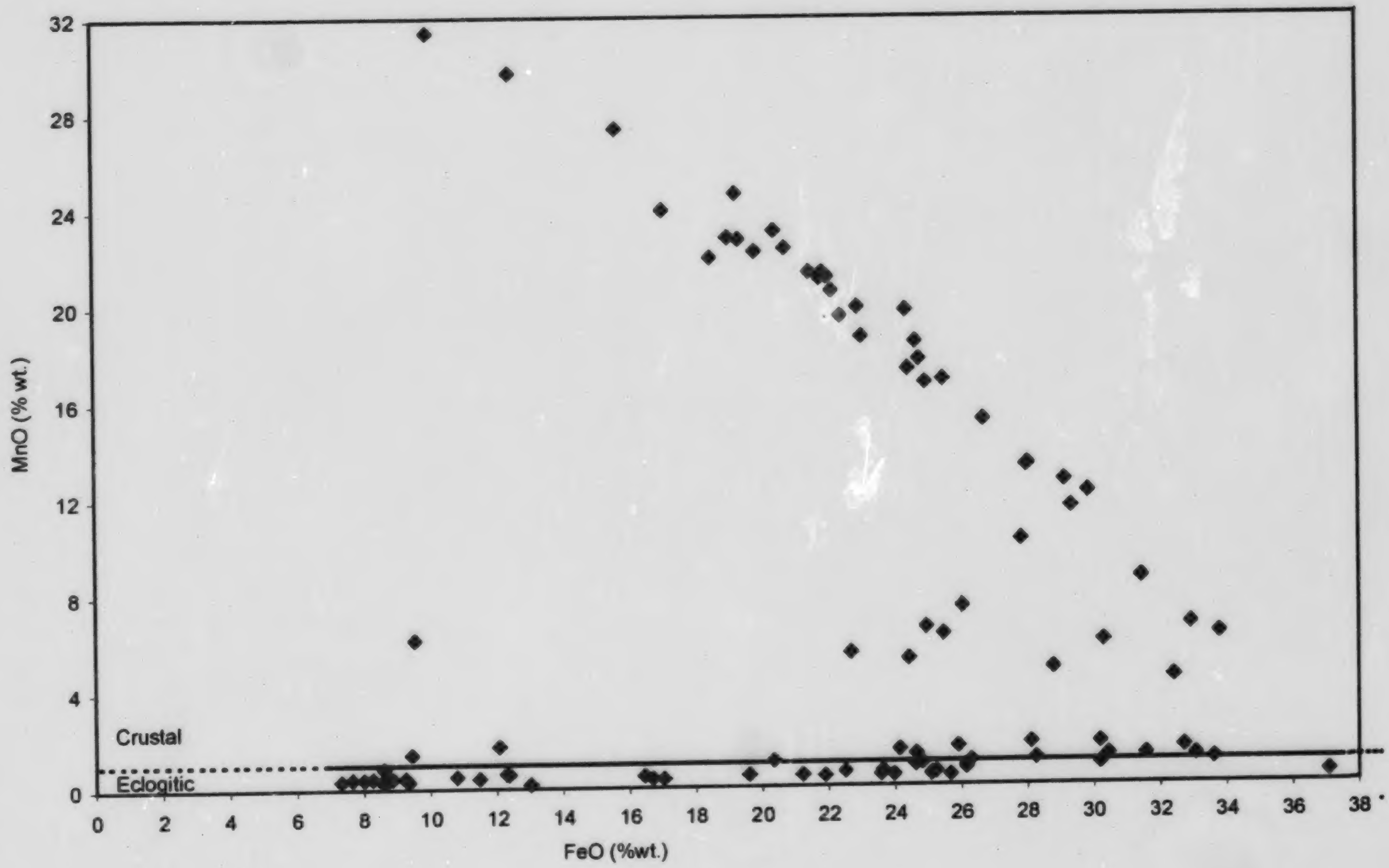

Figure 16: FeO/MnO plot showing eclogitic and crustal garnets from the study area.

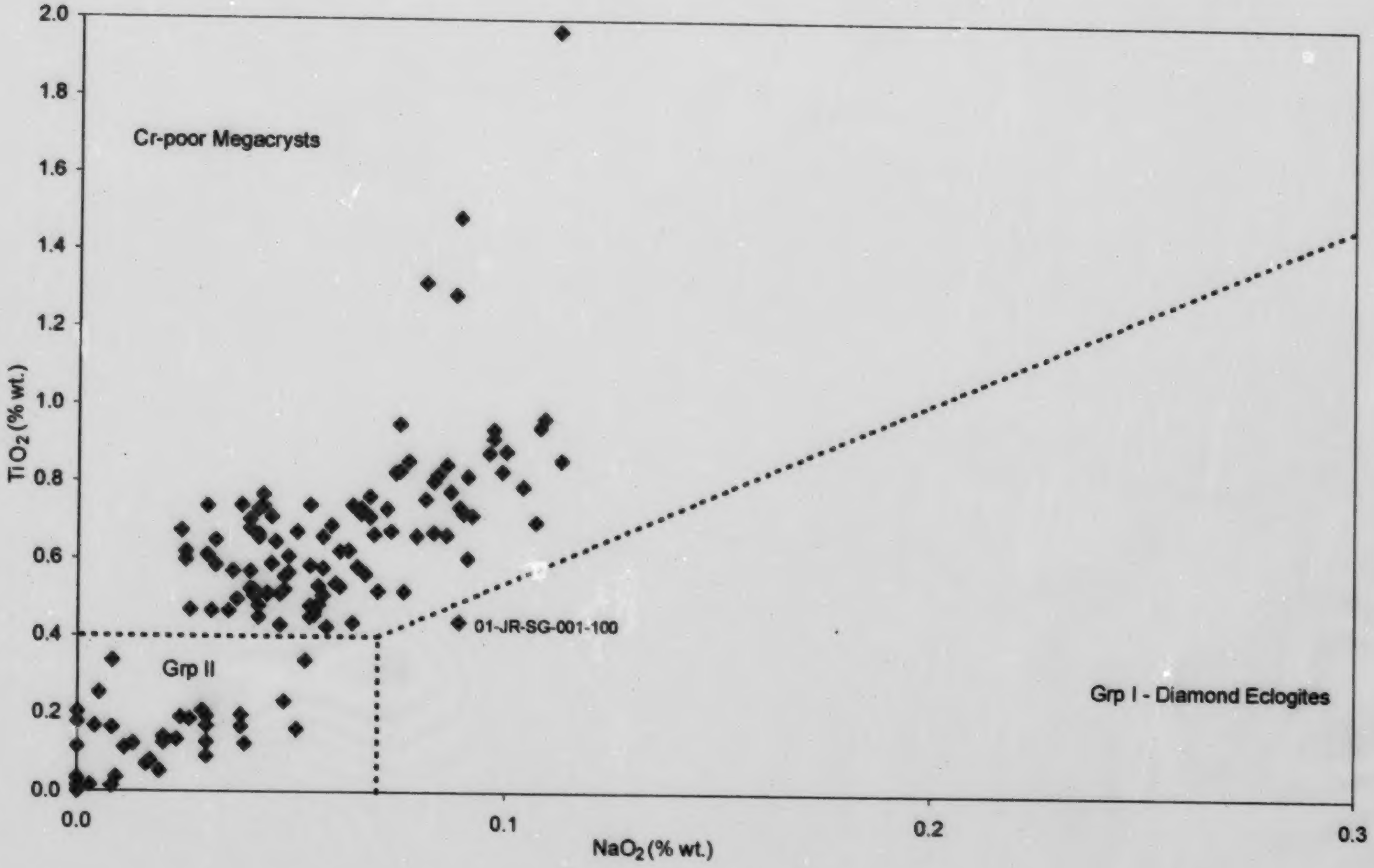

Figure 17: Na_2O/TiO_2 plot showing Group I and II eclogitic garnets and Cr-poor megacrystic garnets from the study area (after Schulze 1999).

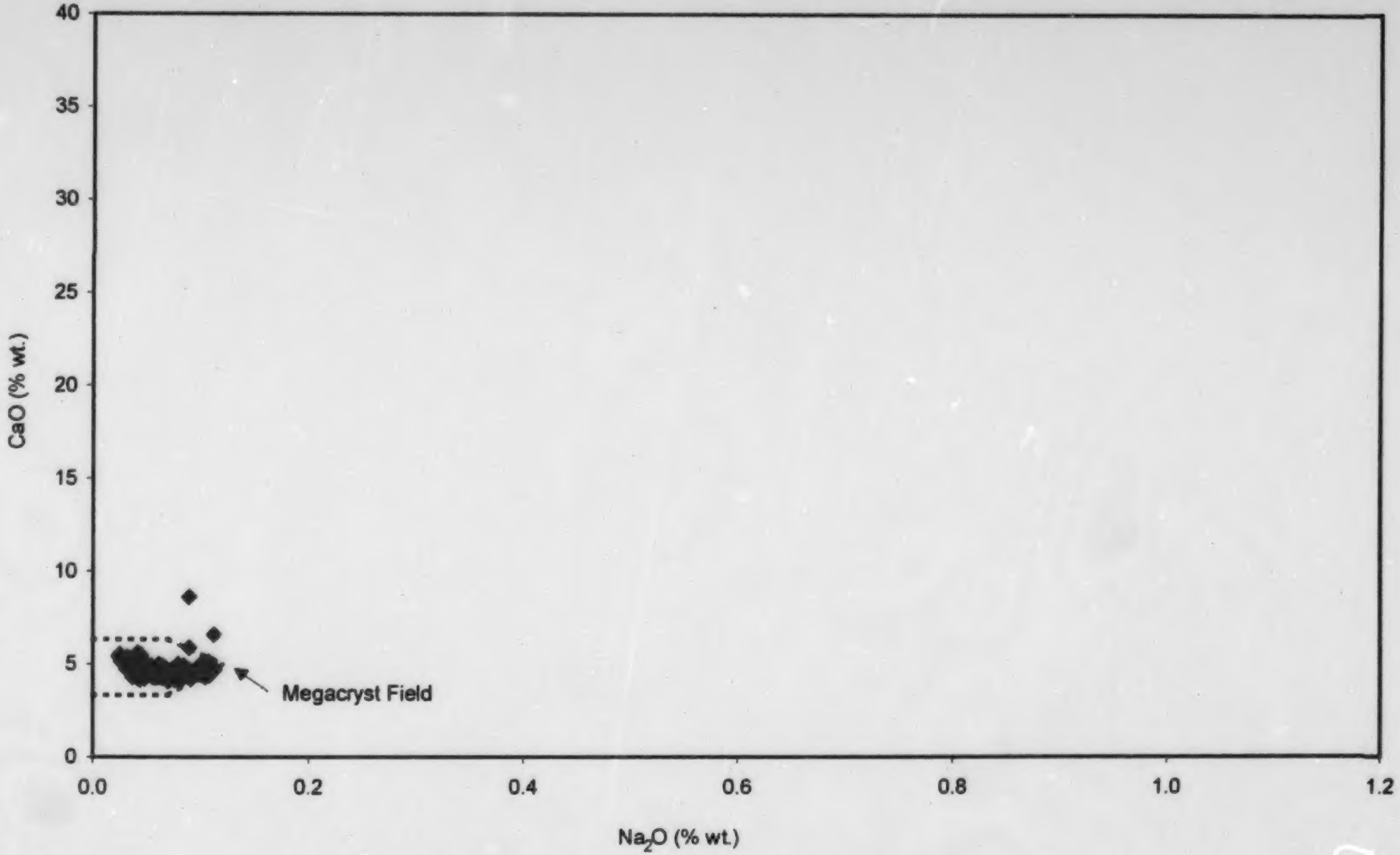

Figure 18: Na$_2$O/CaO plot of garnets from the study area and the megacrystic field (after Fipke et al. 1995).

The presence of one Group I eclogite in combination with 35 group II eclogitic garnets suggests that some of the eclogite source rocks sampled may have been diamond bearing. The presence of 15 G10 garnets suggests that the peridotite source was potentially diamond bearing. As was the case in the survey conducted last year (Allan 2001) immediately east of the present survey, the KIM garnet signature for the study area is predominantly peridotitic in nature, as evidenced by the numerous G9 garnet grains recovered. Therefore, it can be inferred that any kimberlites or related rocks that may exist in the region sampled more mantle-derived peridotite than eclogite.

The regional occurrences of G10s, G9s, Group I and Group II ECLs and Cr-poor megacrysts are summarized in Figures 19, 20, 21, 22 and 23 respectively. In all figures it is obvious that the anomalous sites occur almost entirely within the northern part of the survey area. More importantly, these anomalous trends are located almost entirely north of the Grenville Front Tectonic Zone within the Superior and Southern provinces. Only a few anomalies are scattered throughout the Grenville Province. It is also interesting to note that almost all of the anomalous sites follow trends along the Lake Temiskaming Structural Zone. With the exception of the G9 grains, almost all of the anomalies are located on or very near the faults that occur within the Lake Temiskaming Structural Zone in the northern portion of the survey area. It is within this structural zone, just north of the survey area in the New Liskeard – Kirkland Lake area, where numerous kimberlite pipes have been identified. As illustrated in Figure 19, G10s are well distributed throughout the northern portion of the study area, mainly in concentrations of 1 grain per sample with the exception of sample 253 that contains 2 grains. The G9s are also distributed over the same area as the G10s; there are additional anomalies and the number of G9 grains per site increases significantly with respect to the G10s (Figure 20). G9 and G10 garnet grains were both recovered from sample sites 123, 165, 180, 181 and 182. Group I ECLs are extremely rare in the area as only one sample site yielded a single grain (SG-001) (Figure 21). Anomalous Group II ECLs are also rare within the study area. However, 2 anomalies were identified, SG-001 and 214, yielding 7 and 3 grains respectively (Figure 22). The majority of the samples that contain ECLs also contain G10s and G9s. The distribution of Cr-poor megacrystic garnets is also evenly distributed throughout the northern portion of the survey area (Figure 23). Approximately 10 to 12 grains are scattered south of the Grenville Front Tectonic Zone. The anomalous sites of Cr-poor megacrysts are coincident with occurrences of G9 and G10 garnets, Group I and Group II ECLs.

Chromites

Chromite represents one compositional end-member in the spinel group of minerals and occurs widely in mafic to ultramafic rocks. Kimberlitic chromite grains allow the determination of the amount of chromite harzburgite sampled and disaggregated by the kimberlite (Fipke et al. 1995). Evidence summarized by Griffin et al. (1994) suggests that Cr_2O_3 increases with temperature and pressure in chromite. Thus, chromite with high Cr_2O_3 is most likely to have originated at depth and can be interpreted to be of kimberlitic origin. Therefore, Cr is a significant indicator of diamond potential.

Chromites have distinct compositional characteristics that can be used in exploration programs to determine diamond potential of an area.

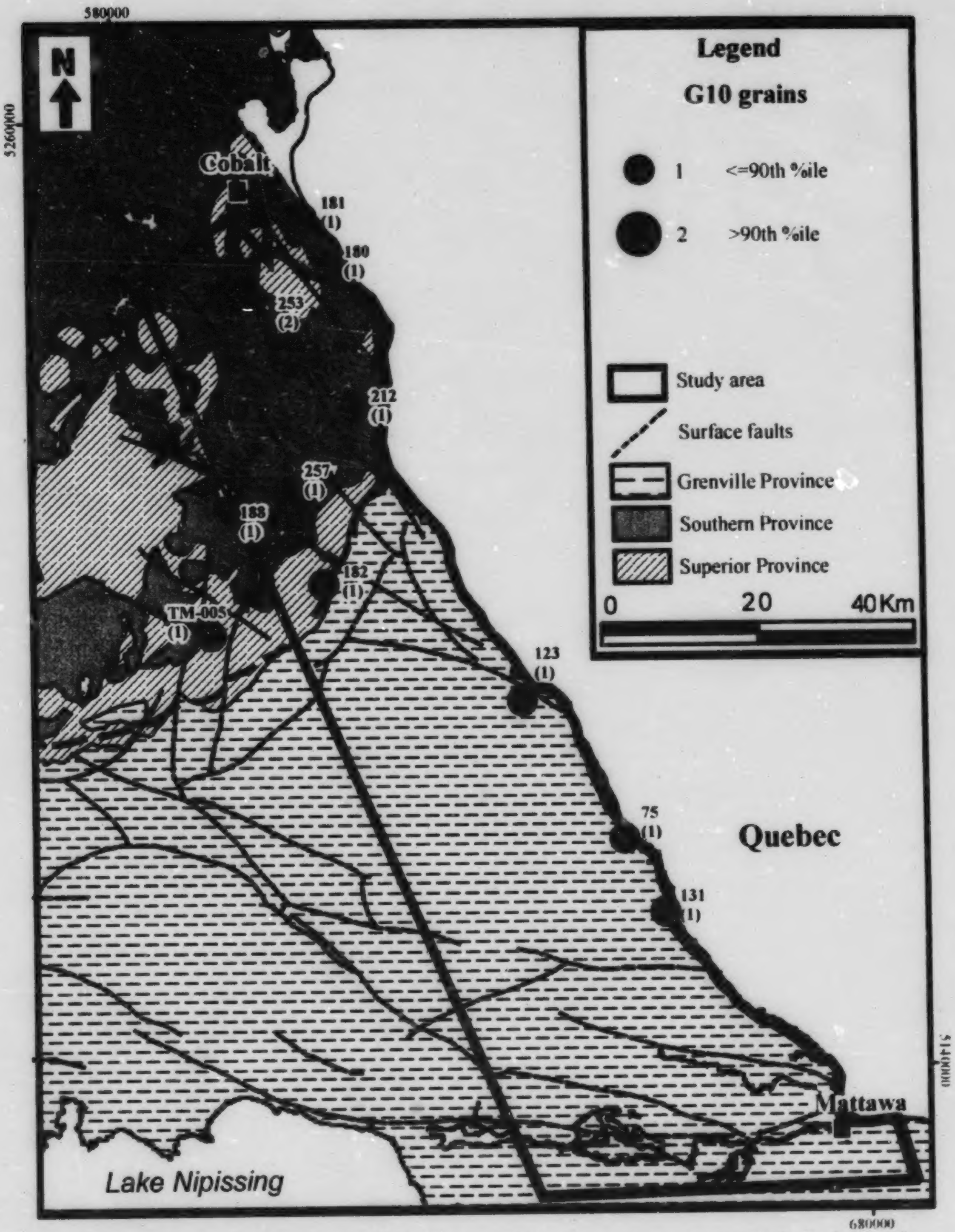

Figure 19: Regional distribution of G10 garnet grains. Anomalous sites are labelled with the corresponding number of grains shown in brackets.

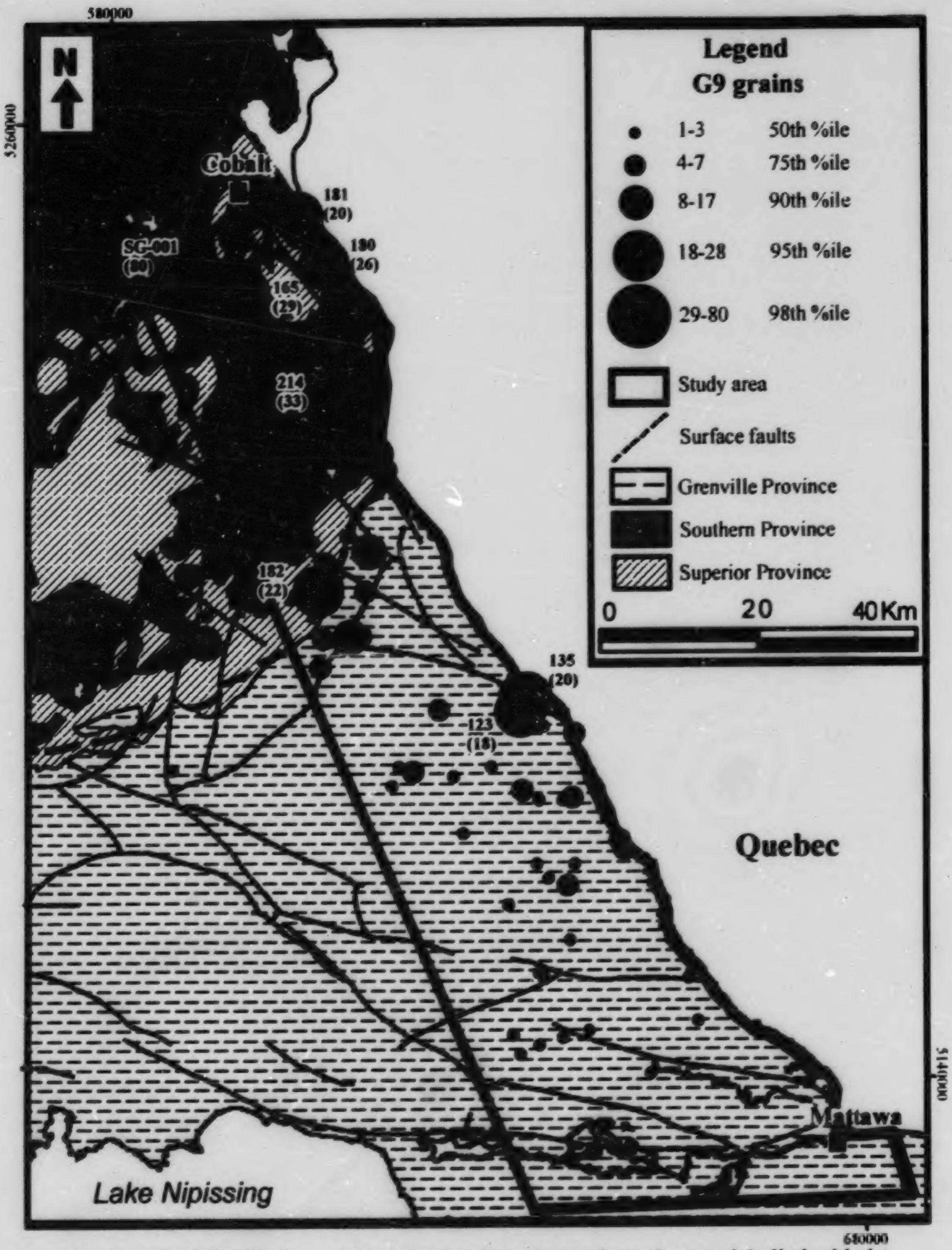

Figure 20: Regional distribution of G9 garnet grains. Anomalous sites are labelled with the corresponding number of grains shown in brackets.

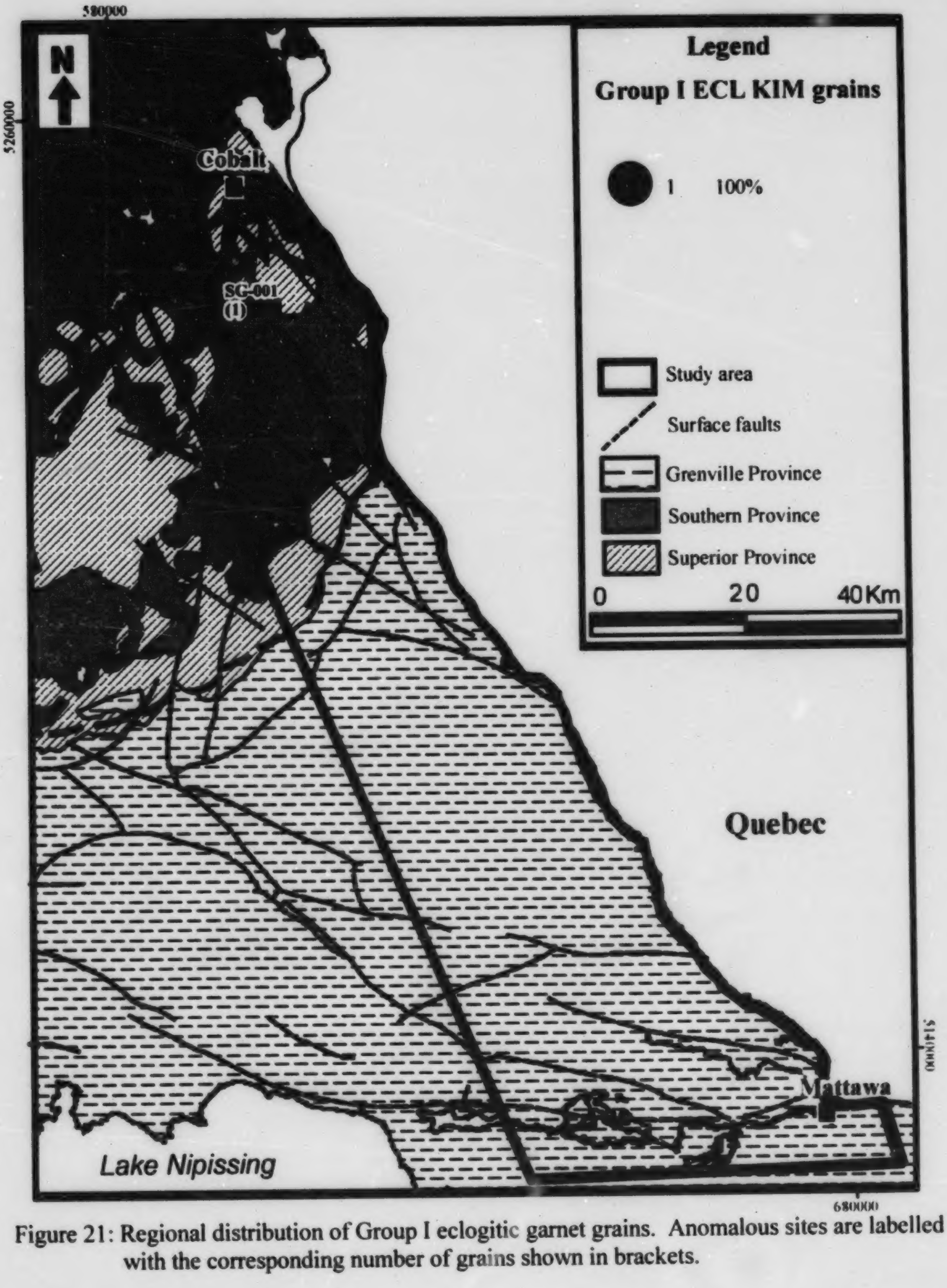

Figure 21: Regional distribution of Group I eclogitic garnet grains. Anomalous sites are labelled with the corresponding number of grains shown in brackets.

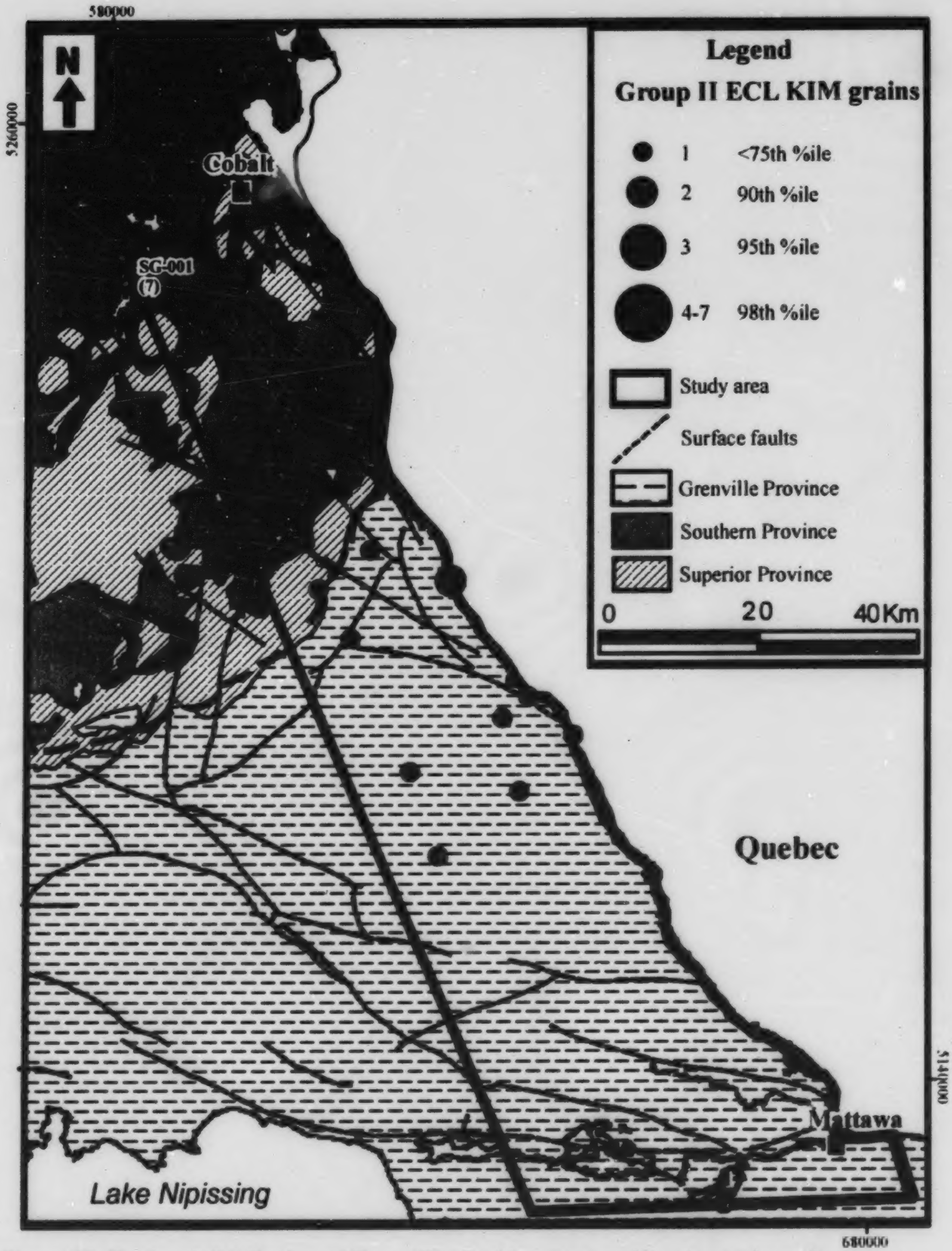

Figure 22: Regional distribution of Group II eclogitic garnet grains. Anomalous sites are labelled with the corresponding number of grains shown in brackets.

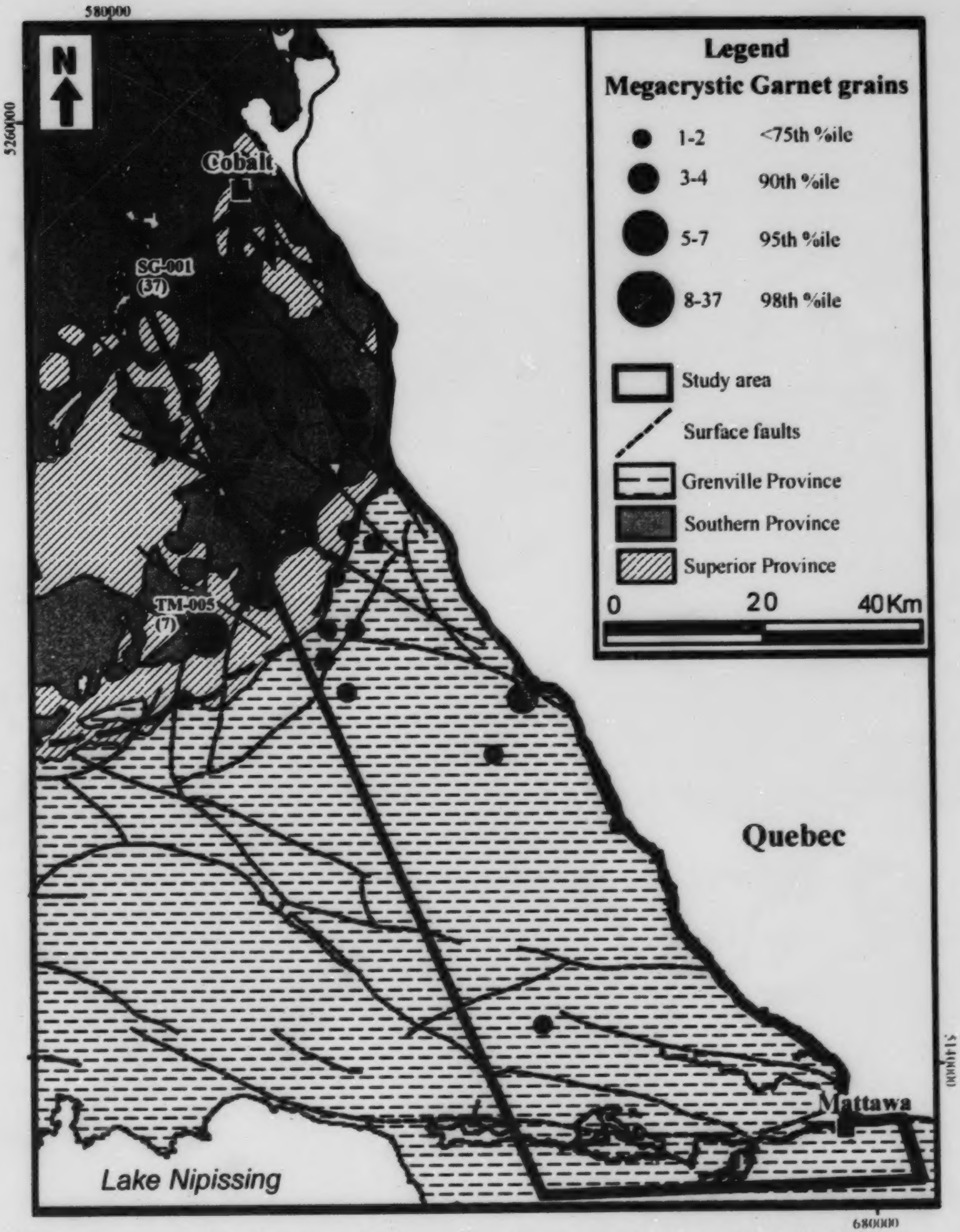

Figure 23: Regional distribution of Cr-poor megacrystic garnet grains. Anomalous sites are labelled with the corresponding number of grains shown in brackets.

Chromites plotting in the diamond inclusion field generally contain concentrations of MgO >10 wt% and Cr_2O_3 >61 wt% (Figure 24). Finding such a chromite in surficial material or a rock sample is just as significant as finding a G10 Cr-pyrope garnet (Stephenson et al. 1999).

Fipke et al. (1995) proposed that the TiO_2 and Cr_2O_3 concentrations of chromites can be used to isolate kimberlitic and lamproitic chromites from other sources. In general, the largest population of chromites recovered during modern alluvium surveys is characterised by Ti-poor compositions (likely from a combination of crustal and mantle sources); these plot in the field of compositional overlap with other sources (Ontario Geological Survey 2001). However, chromites that plot in this overlap field may be considered as possible kimberlite indicator minerals.

A total of 857 chromites were recovered by heavy mineral processing and sent for microprobe analysis. Precise geochemical classification resulted in the following distinctions: 8 diamond inclusion/intergrowth chromites, 12 considered to be unique to the kimberlites and lamproites, 821 of possible kimberlitic affinity (overlap field) and 16 non-kimberlitic/lamproitic. Figure 24 shows the distribution of the compositional data on a MgO vs. Cr_2O_3 plot. Figure 25 illustrates the distribution of the data on the Fipke et al. (1995) TiO_2 vs. Cr_2O_3 binary plot. Figure 26 provides an expanded view of the diamond inclusion/intergrowth and kimberlitic/lamproitic fields with labelled sample site numbers. Sample SG-007-018 plots just below the diamond inclusion field on the MgO vs. Cr_2O_3 plot and within the diamond inclusion field on the TiO_2 vs. Cr_2O_3 plot and is therefore considered a diamond inclusion chromite. The 821 chromites that fall within the overlap field are considered as possible KIMs.

If the picked versus estimated grain counts for individual samples is taken into account, the estimated total number of recovered chromite grains increases from 857 to 1921 and therefore, the number of possible KIMs increases to 1885 grains (1921 recovered grains minus the 12 unique field kimberlitic chromite grains, 8 diamond inclusion chromite grains and 16 non-kimberlitic chromite grains). The regional distribution of diamond inclusion chromites, total KIM chromite and total KIM chromites including those of possible kimberlitic affinity (overlap field) based on picked and estimated data are shown in Figures 27, 28 and 29 respectively. Information on samples in which the number of grains was estimated is summarized in Table 1. From the diamond inclusion and total chromite KIM grain figures, it is again obvious that the anomalies occur mainly within the northern portion of the survey area along the northwest trending faults of the Lake Temiskaming Structural Zone. Samples 214 and 246 are anomalous in both figures 27 and 28 with 4 chromite KIM grains at site 214. However, when the total possible chromite KIMs are plotted (Figure 29) the anomalous sites are seen to be distributed throughout the entire survey area. There are, however, 2 clusters worth noting; one that follows the Montreal River Fault (samples 165, 253, 214, 197) and a cluster within the Grenville province (samples 135, 134, 97, 73, 126). These anomalies contain as many as 498 grains (estimated grain data). The large number of chromite anomalies found in the southern portion of the survey area, could be due, in part, to the fact that chromite is the most resistant KIM species. These grains could have undergone a second cycle of reworking and transport dispersing them as far south as the Mattawa River. Another interesting observation is that many of the possible chromite KIMs coincide with anomalous gold grain sites. Further discussion on this observation is found in the Gold Grain section of this report.

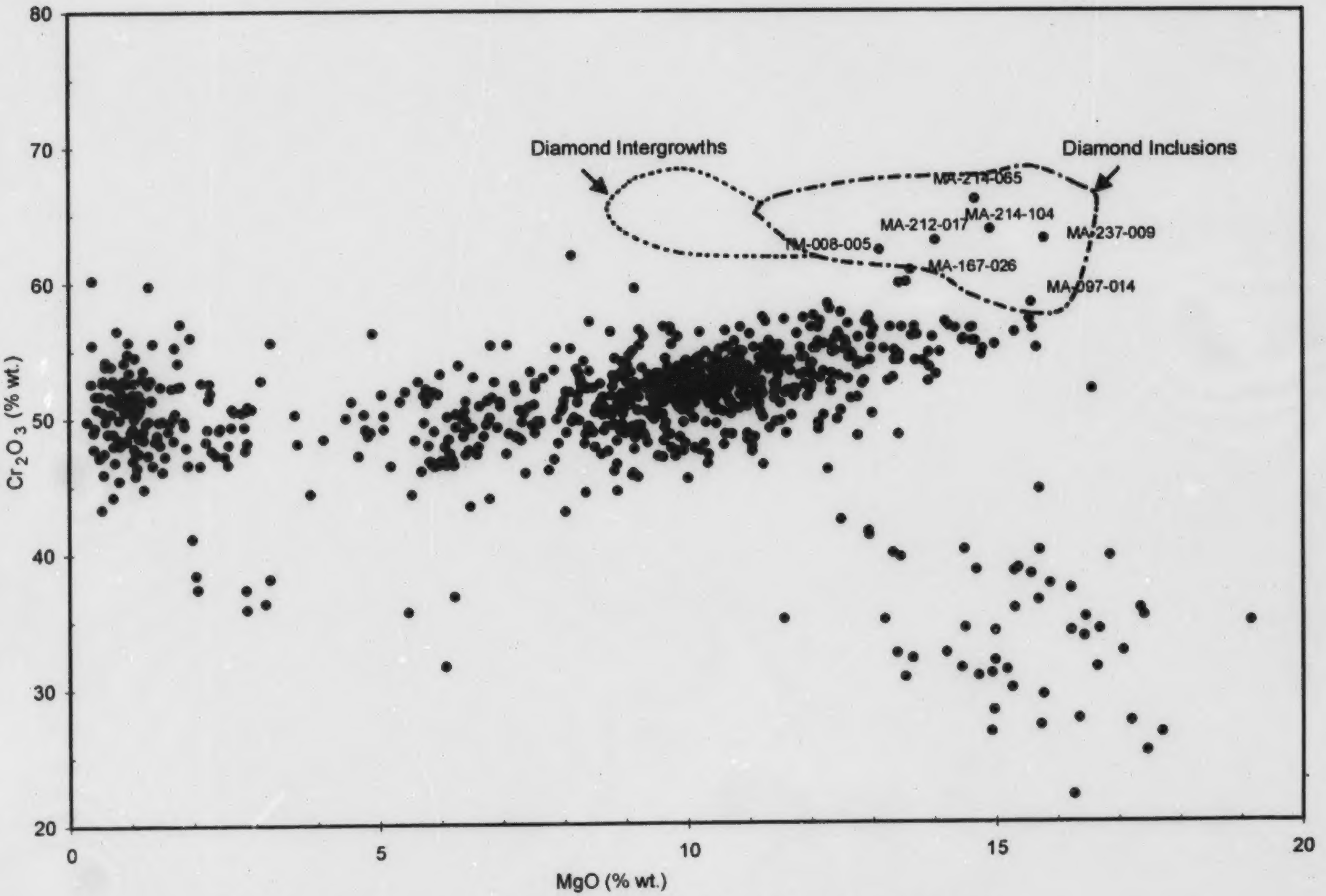

Figure 24: MgO/Cr_2O_3 plot of all chromites recovered from the study area (after Fipke et al. 1995).

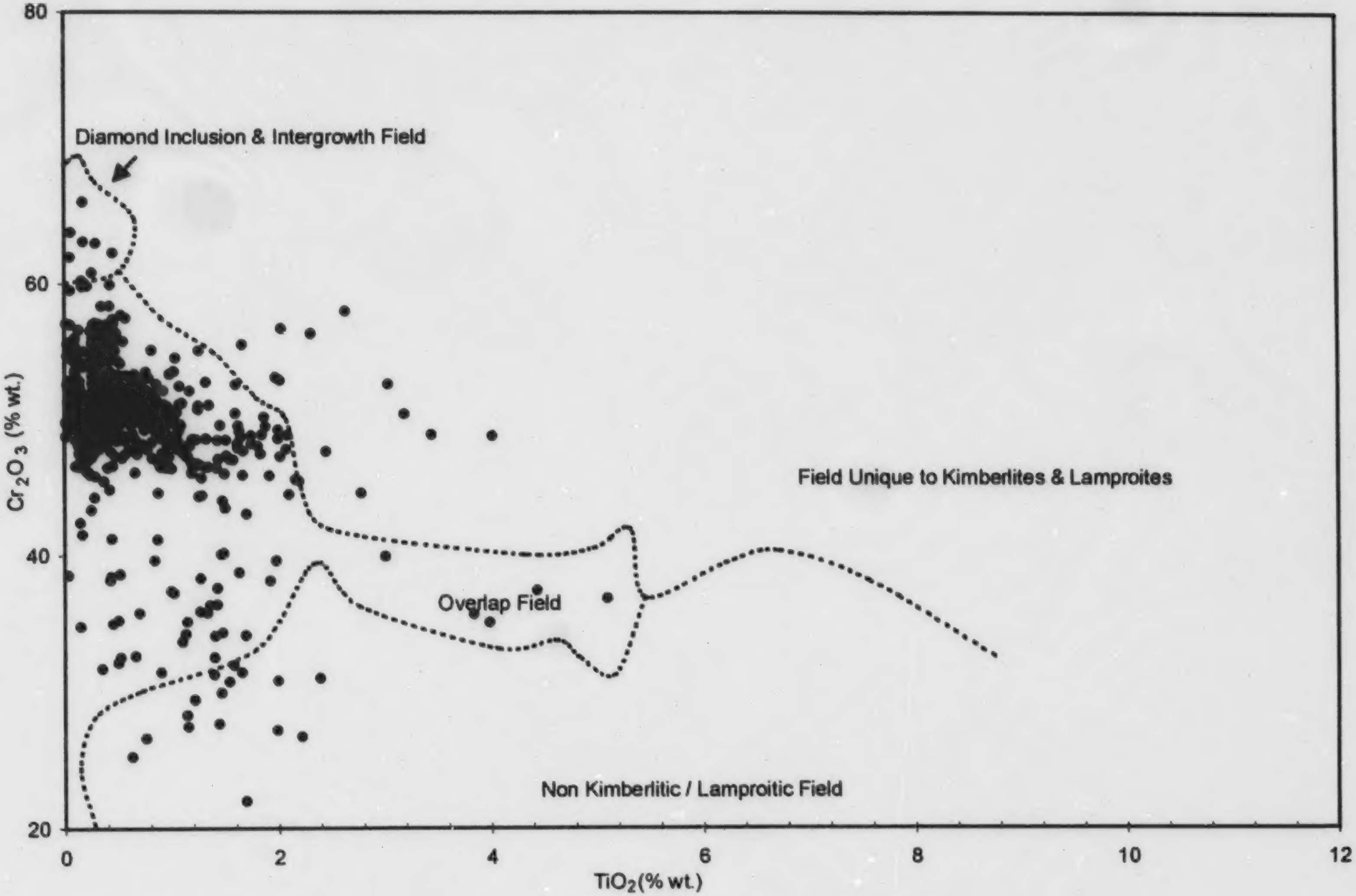

Figure 25: TiO_2/Cr_2O_3 plot of all chromites recovered from the study area (after Fipke et al. 1995).

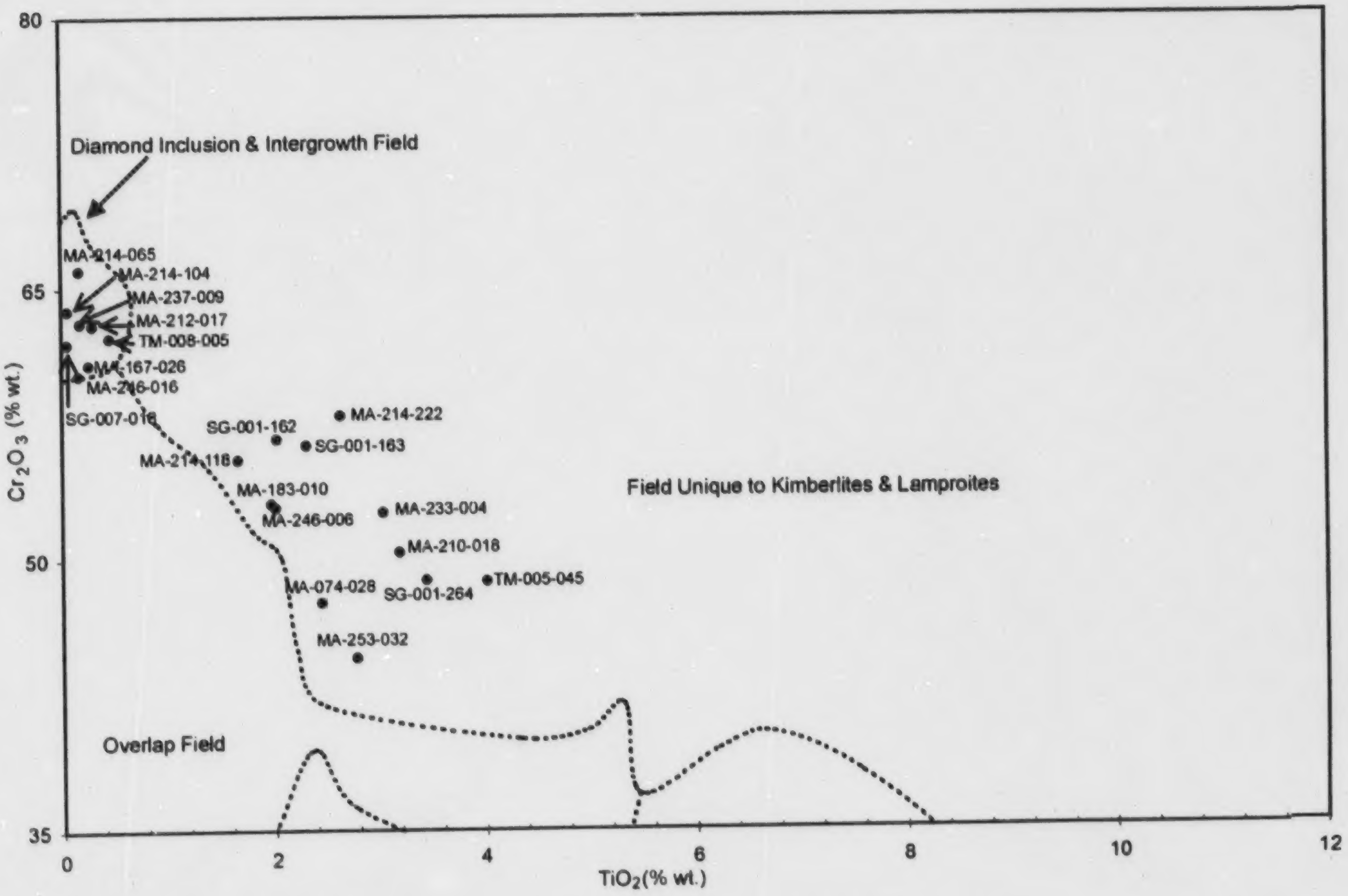

Figure 26: TiO_2/Cr_2O_3 plot showing labeled diamond inclusion, intergrowth and unique field chromites.

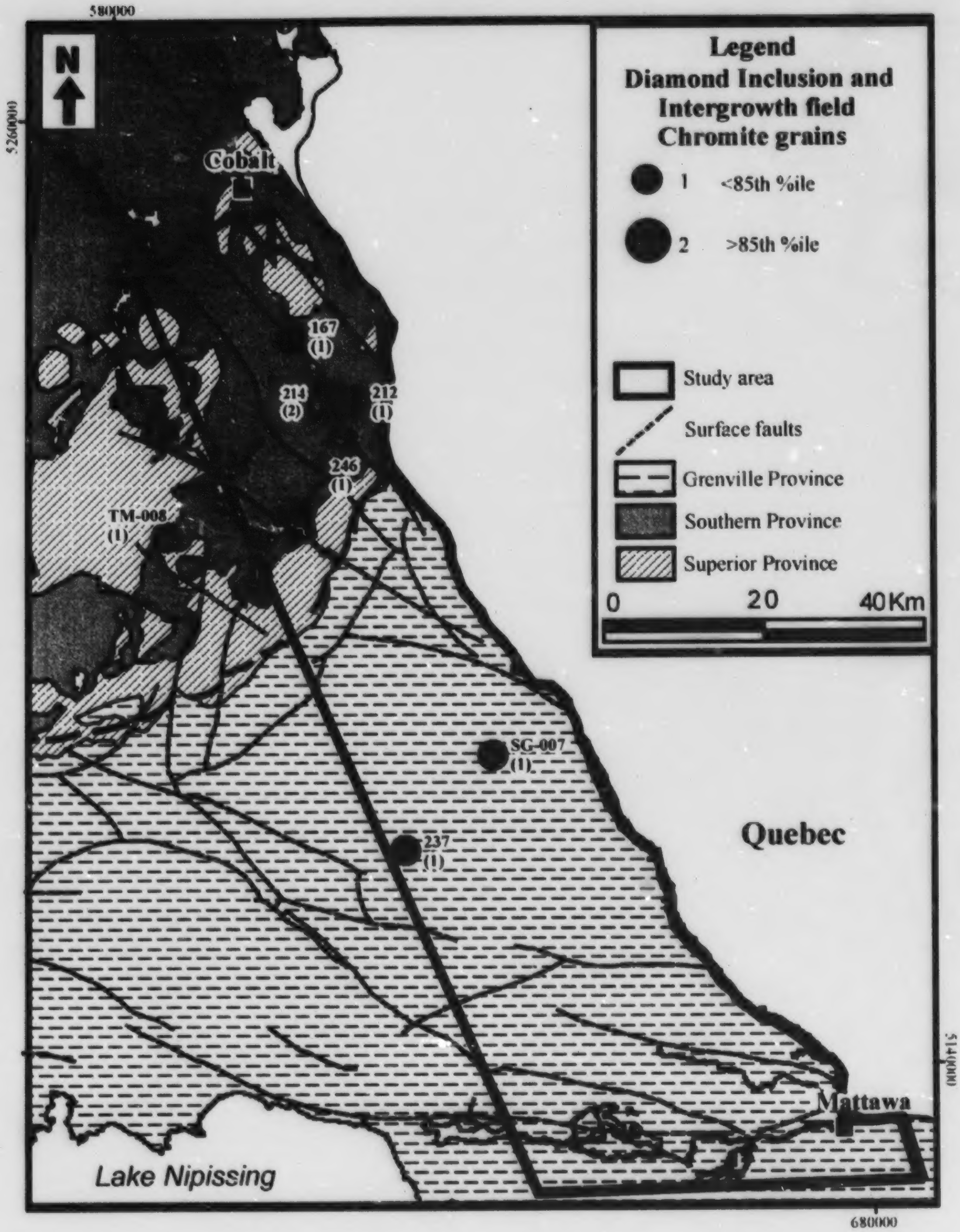

Figure 27: Regional distribution of diamond inclusion and intergrowth field chromite grains. Anomalous sites are labeled with the corresponding number of grains shown in brackets.

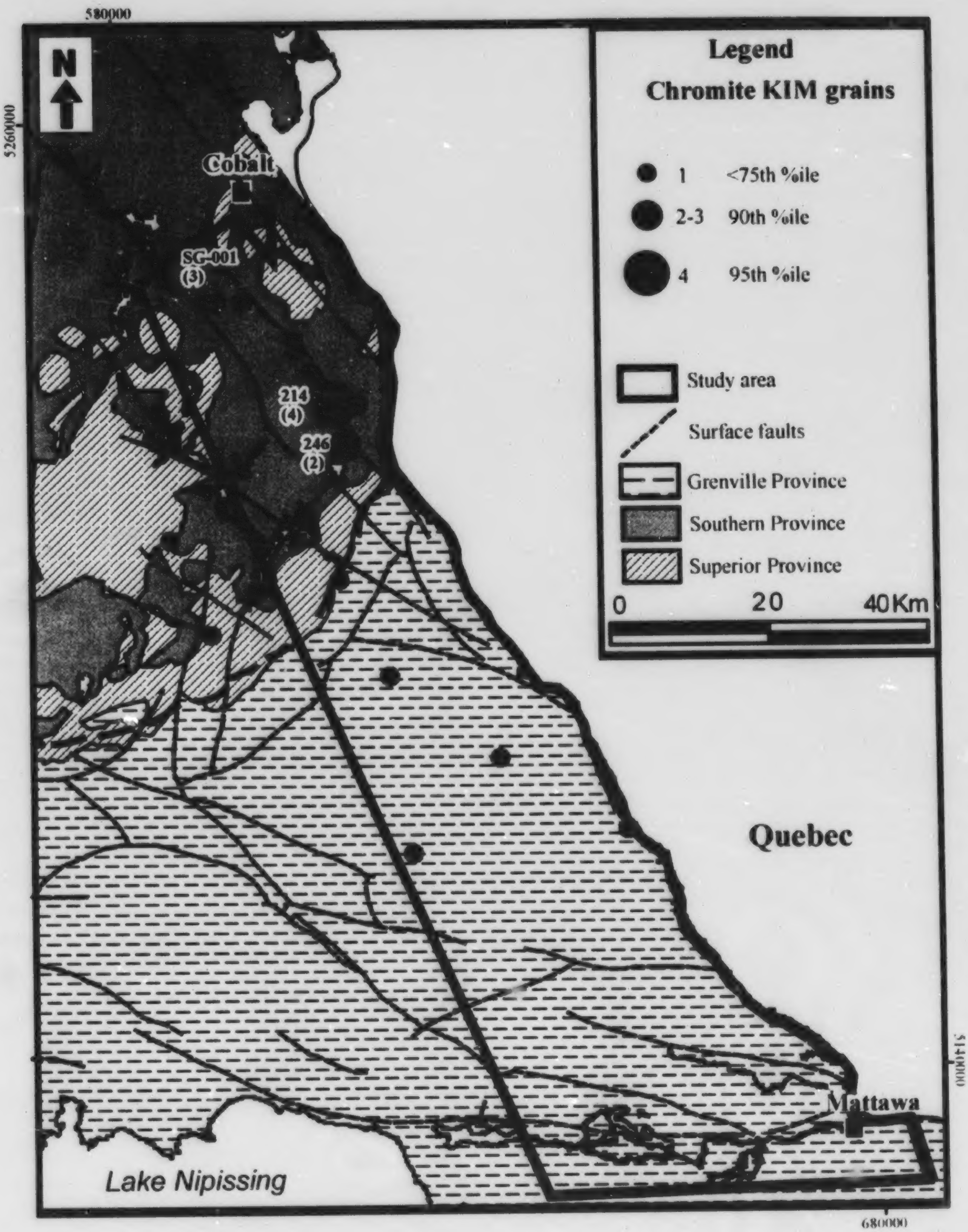

Figure 28: Regional distribution of chromite KIM grains. Anomalous sites are labeled with the corresponding number of grains shown in brackets.

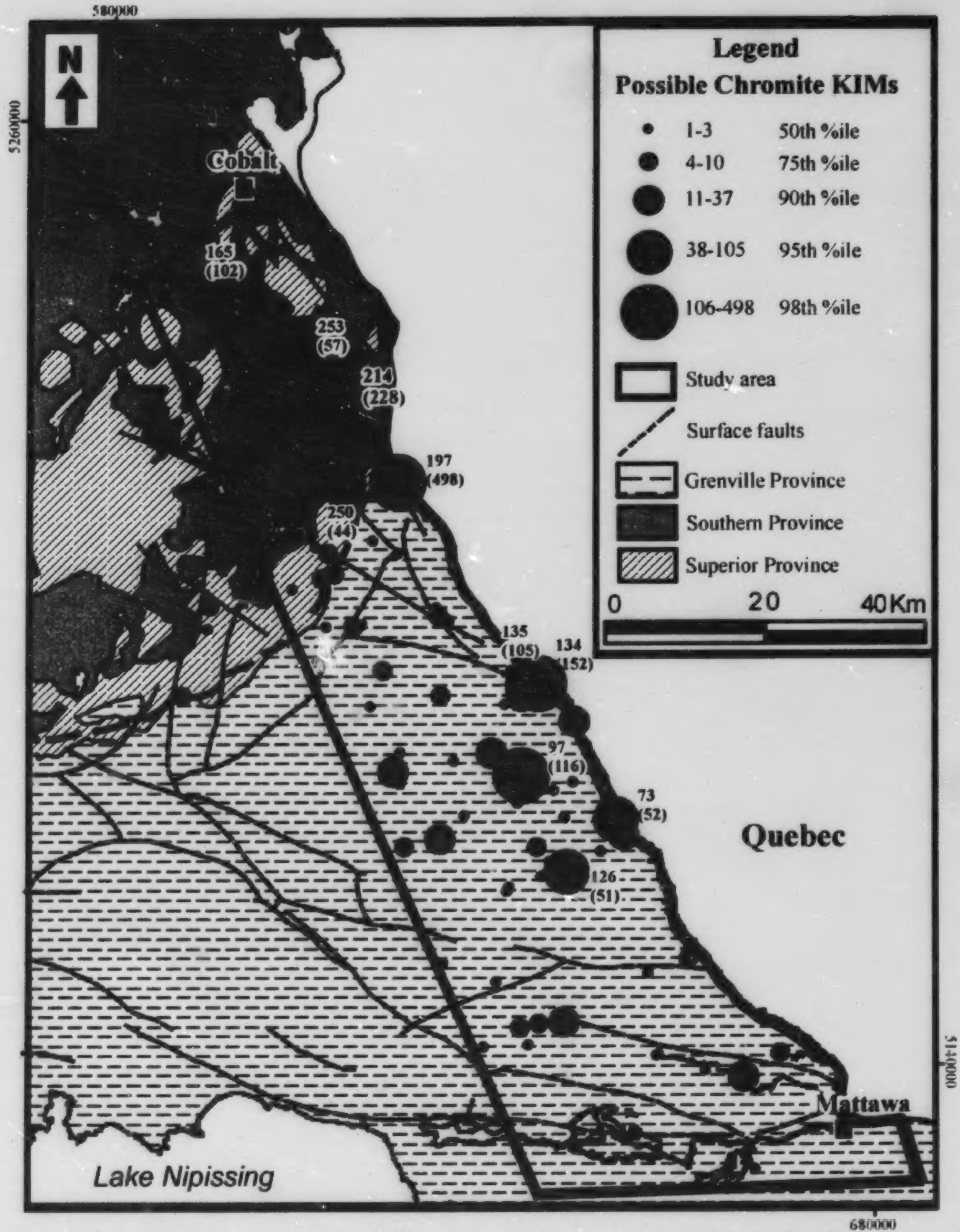

Figure 29: Regional distribution of possible chromite KIM grains (includes overlap field chromites). Anomalous sites are labeled with the corresponding number of grains shown in brackets.

Sample Number	tot CR	tot CR	tot KIM CR	Picked Estimate Normalization			
	p	p(e)	c	tot (c) KIM CR	DI CR	Unique field CR	Overlap field CR
10	2	5	2	5			5
15	2	6	2	6			6
29	9	16	6	11			11
33	13	25	12	23			23
58	4	10	4	10			10
73	44	74	31	52			52
74	15	30	14	28		1	27
75	9	21	7	16			16
97	31	100	36	116			116
123	34	57	22	37			37
126	27	63	22	51			51
134	37	152	37	152			152
135	40	100	42	105			105
165	51	106	49	102			102
197	64	514	62	498			498
214	86	206	95	228	2	2	224
250	30	45	29	44			44
253	31	61	29	57		1	56
SG-001	8	16	10	20		3	17
SG-007	25	40	22	35	1		34

Table 1: Summary of samples in which the number of chromite grains were estimated based on a picked subset. (CR-chromites; p-picked; p (e)-picked estimate; c-confirmed; DI-diamond inclusion).

Cr-diopside

Cr-diopside is not a definitive kimberlite indicator since it occurs in both kimberlite and other basic and ultrabasic rocks. It is, however, one of the major mineral components of the lherzolite peridotite assemblage and since lherzolites are not a major sources of diamonds, Cr-diopside can only be considered useful as a KIM and not as a diamond indicator mineral (Ontario Geological Survey 2001). Cr-diopside associated with lherzolitic rock is commonly considered to have high chrome values (>1.5 wt %) (McClenaghan et al. 1999b). More recently Morris et al. (1999) has developed a ternary plot classification of Cr-diopsides, which has proven to be an excellent way of discriminating between Cr-diopsides derived from kimberlite and other sources. A ternary plot of Cr_2O_3-Al_2O_3-Na_2O has been used to define Cr-diopside derived from a deep mantle source as opposed to a shallow crustal source. For kimberlitic Cr-diopsides, the Cr values range from 1 to 40 molar wt % and Al_2O_3 ranges from 2 to 50 molar wt %. Na_2O ranges are related to Cr content. For example, when 1 molar wt % <Cr_2O_3 <20 molar wt %, Na values are 29 to 48 molar wt % and when Cr_2O_3 >20 molar wt %, the range increases from 19 to 58 molar wt % but does not exceed 65 molar wt% (Allen 2001).

A total of 1122 chrome diopsides were identified by microprobe analysis. The ternary plot of $Cr_2O_3/Al_2O_3/Na_2O$ indicates that 710 grains could be classified as kimberlitic (Figure 30). Of these 710 kimberlitic Cr-diopsides, 33 were high Cr-diopsides (Cr_2O_3 >1.5 wt %). Of the remaining 412 non-kimberlitic clinopyroxenes, 355 contain between 0.5 and 1.5 wt % Cr_2O_3, 11 are high Cr-diopsides (Cr_2O_3 >1.5 wt %) and 46 are low Cr-diopsides (Cr_2O_3 <0.5 wt %). In one sample, however, the number of chrome diopsides was estimated based on a picked subset. Sample 64 was estimated to contain 22 grains therefore bringing the total count of KIM chrome diopsides to 717. The grain data for this sample is summarized in Table 2 and it is the estimated values that have been used in the proportional dot plot figure.

Sample number	tot DC	tot DC	tot KIM DC	Estimate of DC grains in sample
	p	p(e)	c	tot KIM DC
64	17	27	14	22

Table 2: Summary of samples in which the number of Cr-diopside grains was estimated based on a picked subset. (DC-Cr-diopside; p-picked; p(e)-picked estimate; c-confirmed).

The distribution of kimberlitic Cr-diopsides in the survey area is illustrated in Figure 31. In contrast to all other KIM distributions, almost all of the anomalous sites occur within the southernmost portion of the survey area. In addition, the anomalous sites do not coincide with any other anomalous kimberlite indicator minerals. A very small number of sites that plot within the 50th percentile of the G9 grains, and within the 90th percentile of the possible chromite KIMs do coincide with some of the Cr-diopside sites that fall within the 90th percentile, however, this is not a consistent trend. Because of its susceptibility to weathering, the presence of Cr-diopside can be used as a measure of proximity to source. This mineral disappears quickly once transported from source. Therefore, its recovery in a sample suggests local derivation. In this case, all kimberlitic Cr-diopside anomalies are found within the Grenville Province suggesting their source is a rock type other than kimberlite.

As a result of the numerous anomalies present within the Grenville Province, an alternate classification of kimberlitic Cr-diopsides was employed. Figure 32 shows data on a binary plot of atomic Ca/(Ca+Mg) vs. Na_2O wt %. Further constraints on mantle derived clinopyroxene compositions can be placed by projecting data on this plot. The choice of Na_2O as a variable on this diagram is important since there is a correlation between pressure and the amount of Na that can enter the clinopyroxene structure in the form of the jadeite molecule ($NaAlSi_2O_6$) (Ontario Geological Survey 2001). To demonstrate the importance of Na_2O as a discriminant, Cr-diopsides from both peridotite xenoliths carried in kimberlites (globally occurring) and xenocrysts from the Attawapiskat kimberlite field have been plotted on the Ca/(Ca+Mg) vs. Na_2O binary plot (Ontario Geological Survey 2001) (Figure 32).

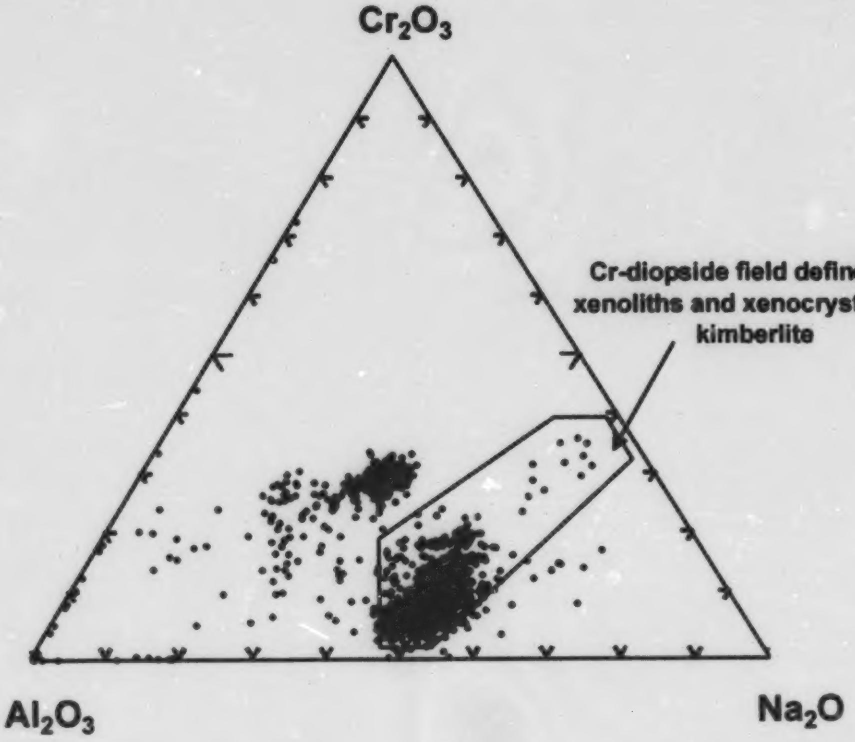

Figure 30: Ternary plot of $Cr_2O_3/Al_2O_3/Na_2O$ showing all Cr-diopside grains from the survey area (after Morris et al. 2000).

When 710 analyses that plot in the compositional field for mantle derived Cr-diopside on the Al-Na-Cr ternary plot (Figure 30) are recast onto the Ca/(Ca+Mg) vs. Na_2O wt % binary plot (Figure 33), only 35 of the grains have compositional characteristics similar to Cr-diopsides found in subcratonic mantle xenoliths. Therefore it is suggested that the use of 2 discriminating techniques is warranted for the Cr-diopsides found in the survey area. When the 35 Cr-diopsides identified here as having mantle type geochemical signatures are plotted, the anomalous sites are concentrated within the northern portion of the study area. The location of the anomalies are coincident with the presence of other KIM anomalies identified within this survey (Figure 34). Sample 14, however, stands apart from the other Cr-diopside KIM grains in that it is anomalous within the 98th percentile, in both distribution figures (Figures 31, 34). Sample 14 contains 39 KIM Cr-diopside grains according to the Al-Na-Cr ternary diagram and contains 10 KIM Cr-diopsides according to the Ca/(Ca+Mg) vs. Na wt % plot.

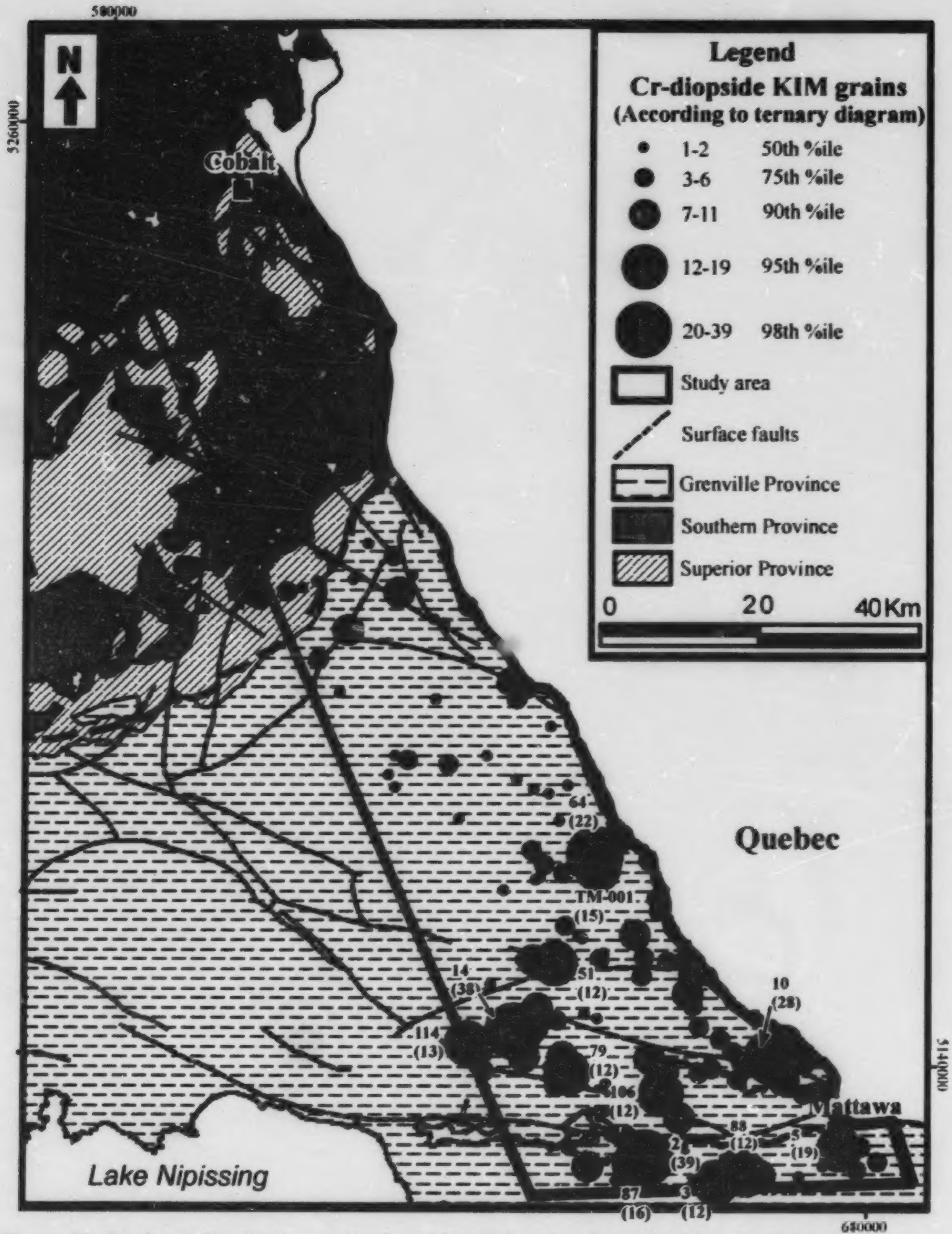

Figure 31: Regional distribution of Cr-diopside KIM grains that fall within the field shown on Figure 30. Anomalous sites are labeled with the corresponding number of grains in brackets.

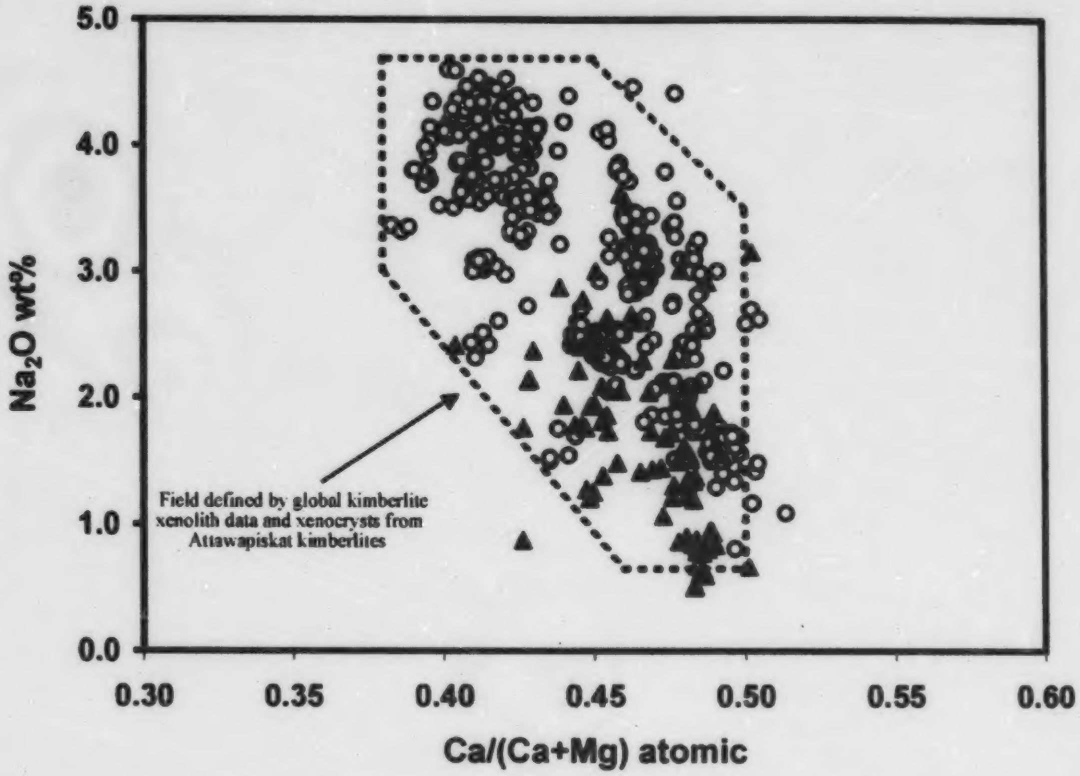

Figure 32: Ca/(Ca+Mg) vs. Na_2O binary plot for lherzolite xenoliths from kimberlites (global) and xenocrysts from Attawapiskat kimberlites. The compositional field outlined here is based on available data and may be subject to modification. Symbols are as follows: shaded triangles-Cr-diopsides from globally occurring mantle xenoliths in kimberlite; open circle-xenocrysts from Attawapiskat kimberlites (after Ontario Geological Survey 2001).

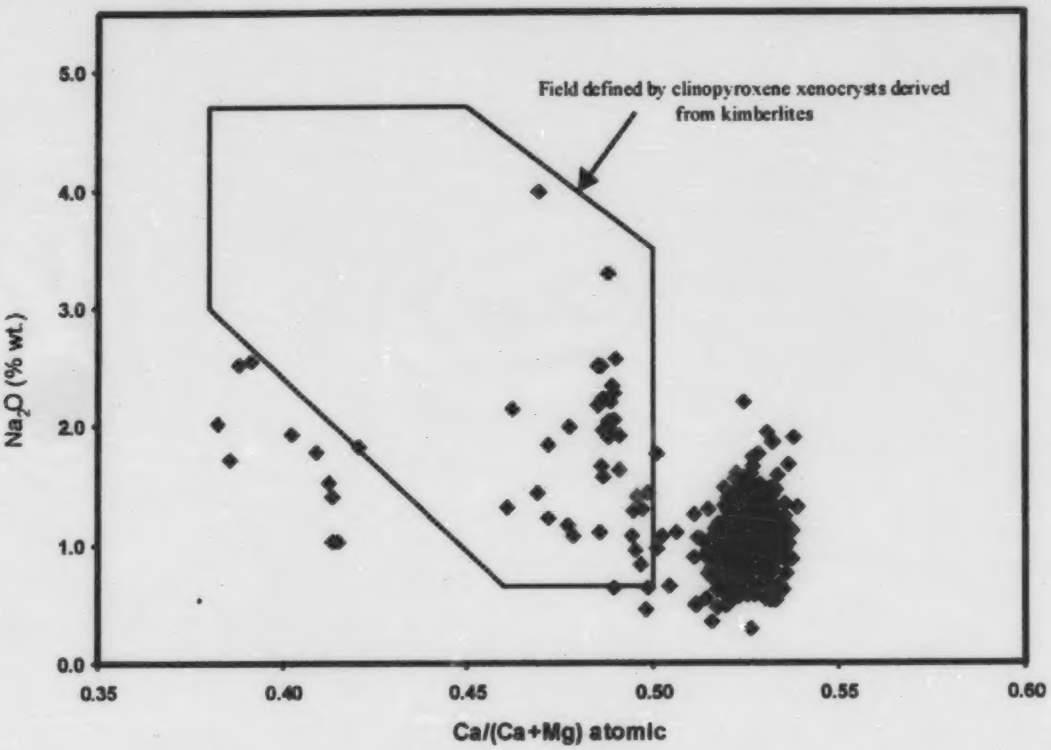

Figure 33: Ca/(Ca+Mg) vs. Na_2O classification scheme for clinopyroxenes from the study area that plot within the field defined by mantle xenoliths and xenocrysts on the Al-Na-Cr ternary diagram (Figure 30).

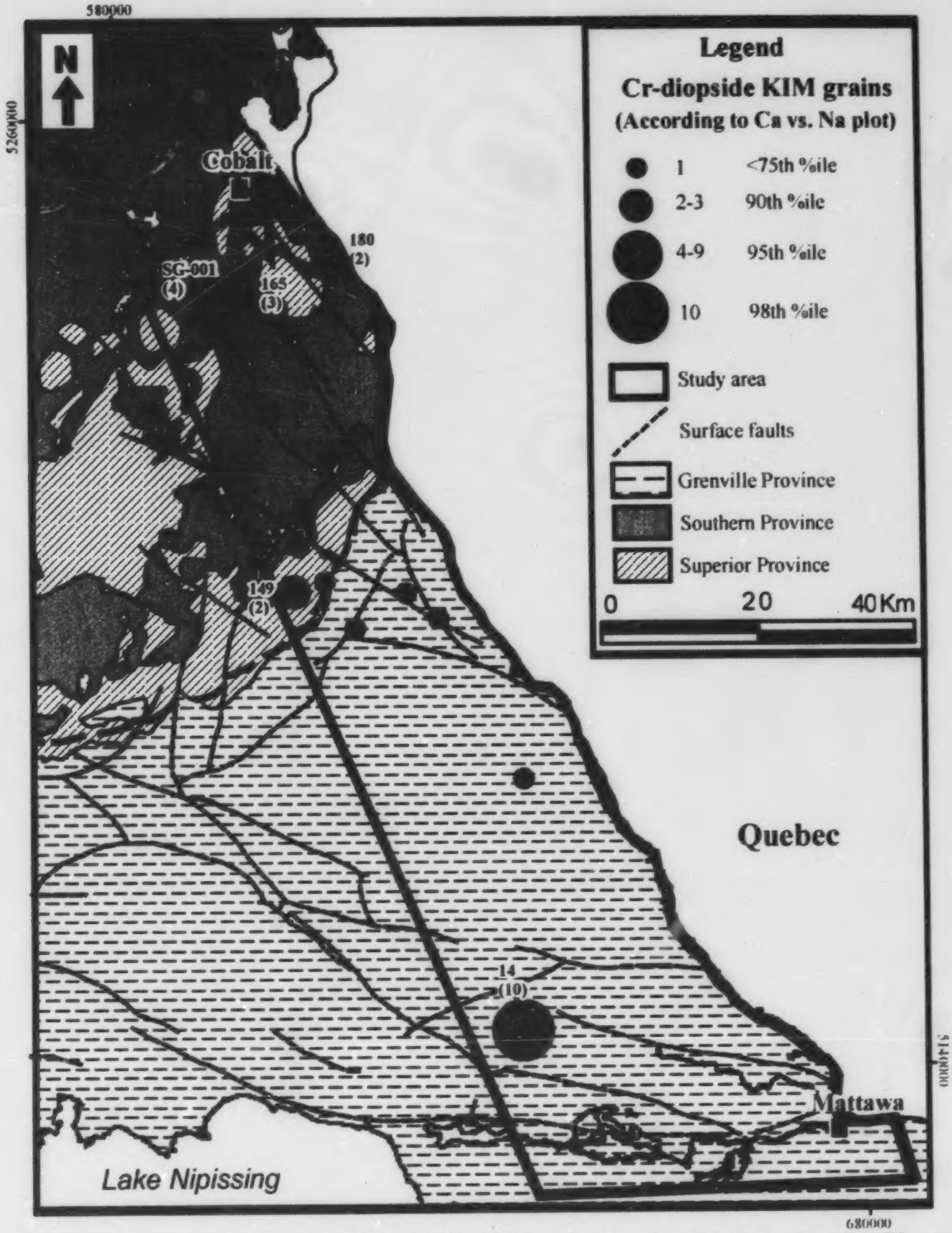

Figure 34: Regional distribution of Cr-diopside KIM grains based on the Ca vs. Na plot (Figure 33). Anomalous sites are labeled with the corresponding number of grains in brackets.

Ilmenite

Ilmenite is a common mineral in Ontario kimberlites (Sage 1996). Kimberlitic ilmenite is typically Mg-rich (4 to 16 wt %) and Cr-rich (0.1 to 11 wt %) (Mitchell 1986) and can be readily distinguished from Mg- and Cr-depleted ilmenite that is representative of crustal rocks. Ilmenite compositions are plotted on a MgO vs. Cr_2O_3 parabolic plot in order to screen out compositions that are from crustal sources (MgO < 4 wt %).

As the incorporation of the Fe_2O_3 molecule into the ilmenite structure is dependent on the oxygen fugacity (*f*O2) in the kimberlitic magma (Hagerty and Tompkins 1983), ilmenite compositions may be used to predict whether magmatic conditions would have been favourable (reducing) or detrimental (oxidizing) for diamond preservation during kimberlite emplacement (Ontario Geological Survey 2001). Highly oxidizing conditions are known to promote diamond resorption and can remove up to 50% of the original diamond content (Gurney and Zweistra 1995). Ilmenites are abundant as macrocrysts in both kimberlite and its groundmass. Therefore, ilmenites are considered to be representative of both the depth and redox conditions of the magma chamber sampled and of subsequent changes that may have affected the kimberlite upon ascent and emplacement (Gurney and Zweistra 1995).

On a MgO/Cr_2O_3 parabolic plot, ilmenites with MgO > 8 wt % at increased concentrations of Cr_2O_3 indicate high preservation potential (reduced environment). In contrast, ilmenites with MgO < 8 wt % with little or no concentration of Cr_2O_3 indicate less preservation potential (oxidized environment) (Fipke et al. 1995). The mantle source material had to be diamondiferous initially for the presence of diamond preservation ilmenites to be of any significance.

A total of 1306 ilmenites were recovered from heavy mineral processing and sent for microprobe analysis. Of the 1306 ilmenites, 1006 were classified as KIMs and 300 were considered to be crustally derived. The KIM ilmenite population ranges in MgO content from 4.2 to 14.8 wt % (Figure 35). The majority of the grain population is greater than 8 wt % MgO with variable Cr_2O_3 content. However, the plot does illustrate the presence of a cluster of samples with >6 to <8 wt % MgO and <1 wt % Cr_2O_3. If the number of picked versus estimated grain counts for individual samples, is taken into account, the total number of recovered ilmenite grains increases from 1306 to 21984 and therefore, the number of possible KIMs increases from 1006 to 21684 grains. Data for samples, in which the total number of ilmenites present is based on analyses of a picked subset, are shown in Table 3. The regional distribution of the ilmenite KIM grains, based on estimated grain numbers is shown in Figure 36. Ilmenite anomalies follow the same trends as those observed for all other KIMs. That is, the majority of the anomalies fall within the northern section of the survey area along the northwest trending fault lines of the Lake Temiskaming Structural Zone. The presence of G10 garnets and diamond inclusion chromites in these samples containing diamond preservation ilmenites increases their significance.

Two major anomalies, samples 225 and 228, that fall within the Grenville Province have an abundance of ilmenite grains, 16068 and 4573 grains respectively. It is interesting to note however, that there are no other KIM grains associated with these samples except one chromite grain found in sample 225. The MgO contents of ilmenite in both samples are at best marginal for kimberlite. Therefore, it is unlikely that these numerous ilmenites are reflective of a

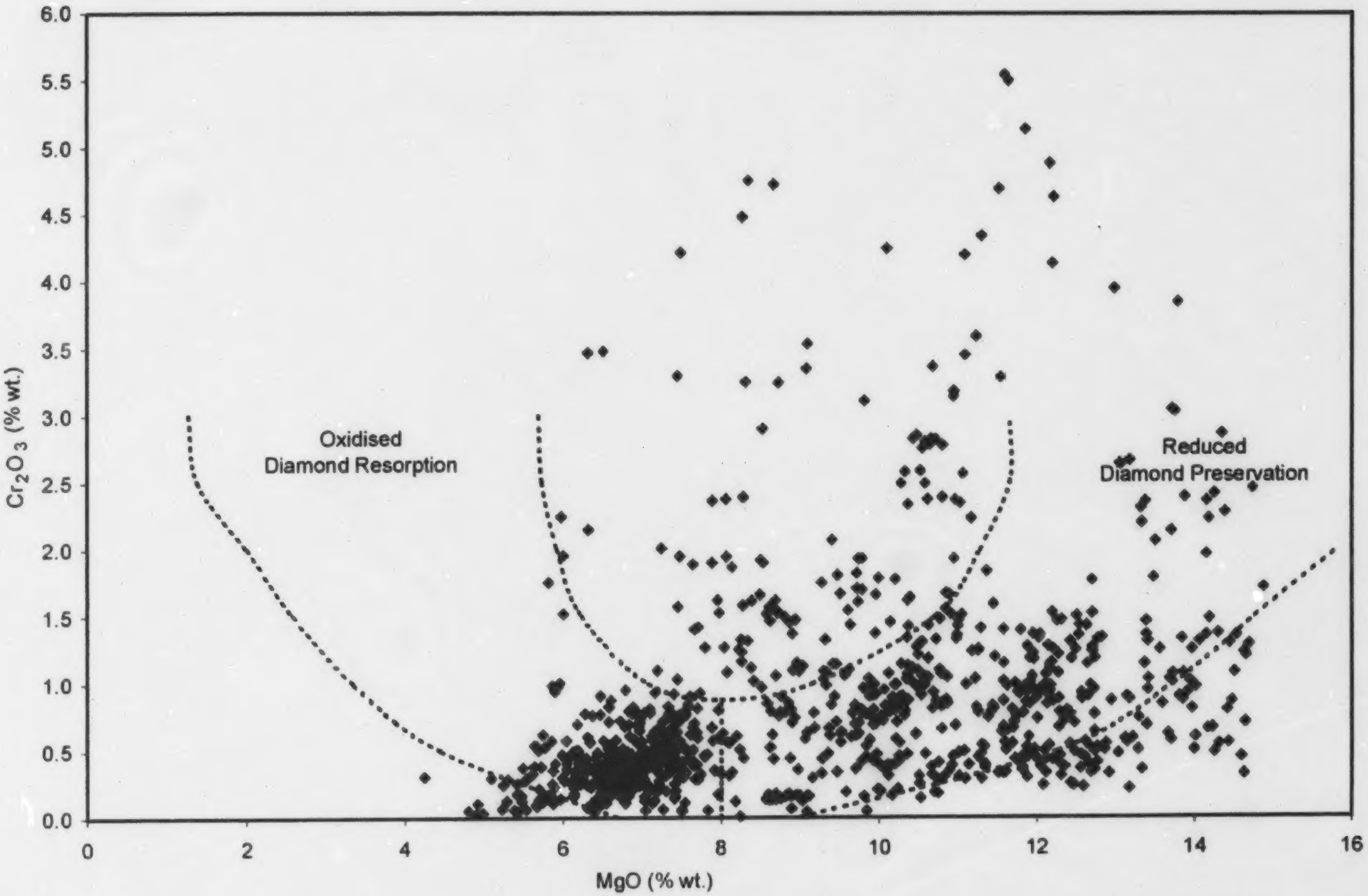

Figure 35: MgO/Cr_2O_3 plot of kimberlitic ilmenites (>4 wt% MgO) from the study area (after Gurney and Moore 1991).

Sample Number	tot IM	tot IM	tot KIM IM	Estimate of IM grains in sample
	p	p(e)	c	tot KIM IM
74	7	15	6	13
75	7	14	6	12
97	12	27	8	18
123	11	31	12	34
134	5	12	5	12
135	8	12	7	11
165	78	188	76	183
214	112	187	94	157
225	191	15500	198	16068
228	121	4650	119	4573
253	28	73	25	65
SG-001	102	195	97	185

Table 3: Summary of samples in which the number of ilmenite grains were estimated based on a picked subset. (IM-ilmenite; p-picked; p(e)-picked estimate; c-confirmed).

kimberlitic source, but rather, have a different origin. Sample site 225 is situated very close to the intersection of 2 faults. Sample site 228 follows the same trend and is located over a metamorphosed iron formation rich in iron-magnesium silicate minerals. Such a bedrock type may have provided the source for the numerous ilmenite grains found in these samples (M. Easton, Ontario Geological Survey, personal communication, 2002).

Olivine

Forsteritic olivine is a characteristic mineral in kimberlite but it is not unique to kimberlite as it can occur in a range of ultramafic supracrustal and plutonic rocks (Stone 2001). Also, olivines are easily weathered and break down quite readily during transport. As well, it is often completely altered in many kimberlites such as the Kirkland Lake pipes (Sage 1996). This could be the reason for the lack of olivines recovered in this survey. According to Morris et al. (2000), forsteritic olivines with FO values (MgO/(MgO+FeO)) greater than 90 are considered to be associated exclusively with kimberlite and those with FO values between 80 and 90 are considered to be derived from mafic or kimberlitic sources.

A total of 34 olivine grains were recovered from heavy mineral processing and sent for microprobe analysis. Of these, 33 have MgO numbers greater than 80 indicating that they are derived from mafic or kimberlitic sources; 1 has a MgO number of 78 and is likely derived from a mafic source (Figure 37). Olivines obtained from the Peddie pipe and bedrock derived olivines (Nipissing diabase of the Portage Bay Intrusion; Bonanza Lake and Cross Lake intrusions; the River Valley Intrusion) are also plotted on Figure 37. Of the mafic and kimberlitic derived olivines, 24 grains from the present survey have MgO numbers equal to or greater than 85, similar to the olivines recovered from the Peddie pipe. It should be noted, however, that the number of grains assigned to one sample is estimated from the analysis of a picked subset.

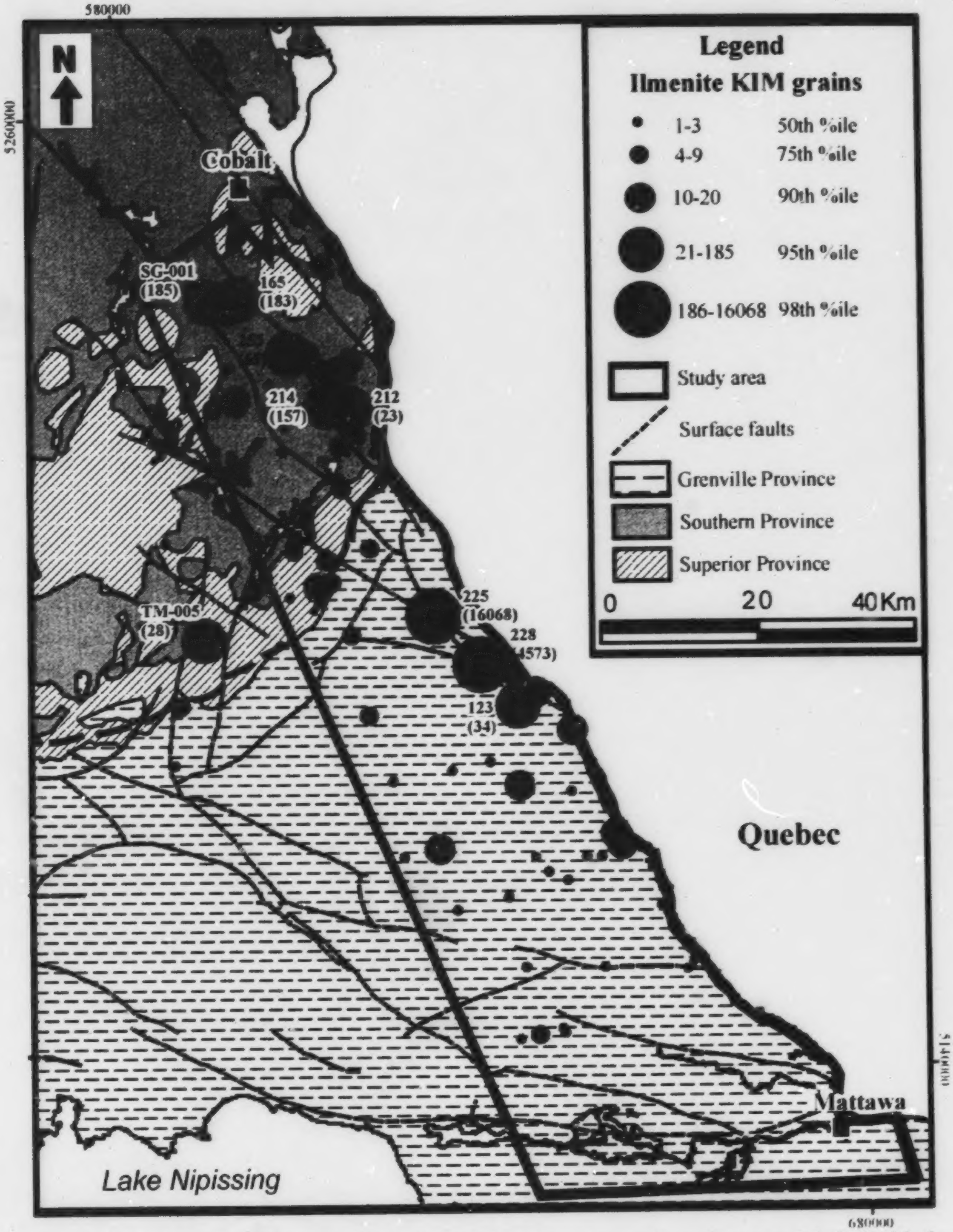

Figure 36: Regional distribution of ilmenite KIM grains. Anomalous sites area labeled with the corresponding number of grains shown in brackets. Note grain numbers shown are estimates based on analyses of a picked subset.

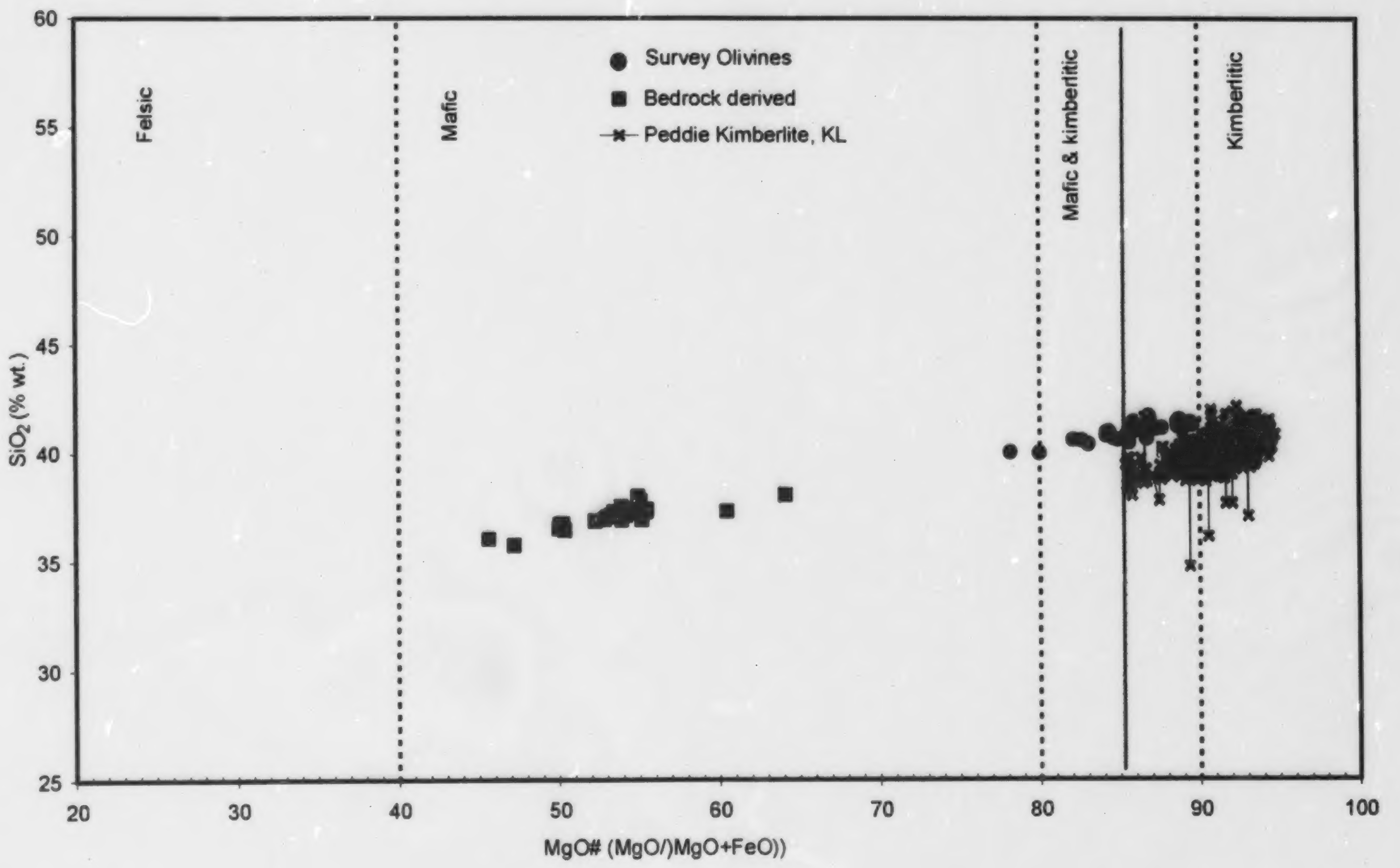

Figure 37: MgO#/SiO$_2$ plot showing compositions of olivines recovered from this survey. Olivines obtained from the Nipissing Diabase at Portage Bay, Bonanza Lake and Cross Lake intrusions (Conrod 1988); the River Valley Intrusion (Easton and Hrominchuk 2002); and the Peddie kimberlite (McClenaghan et al. 1999b) are also plotted.

The total number of olivine grains recovered in this survey, including those estimated in sample SG-001, is 46.

The sample that required picked estimate normalization is summarized in Table 4. The regional distribution of the olivine KIM grains, based on normalized data, is shown in Figure 38. Olivine KIM grains are evenly distributed throughout the northern section of the survey area and are coincident with other KIM grains recovered.

Although the binary discriminant system used here (Morris et al. 2000) is capable of isolating olivine compositions from kimberlitic and other mafic rocks, compositional overlap is substantial (Ontario Geological Survey 2001). As a result, a new classification technique was employed utilizing a large database of olivine compositions isolated from numerous kimberlitic heavy mineral concentrates from Ontario (Ontario Geological Survey 2001). Examination of minor element concentrations from 951 olivine grains picked from the Ontario kimberlite heavy mineral concentrates suggests that additional constraints may be placed on mantle type olivine compositions crystallized at high pressures (Ontario Geological Survey 2001). The kimberlitic compositions are characterized by depleted CaO concentrations when the olivine data was plotted on a binary plot of forsterite content (Fo#) vs. CaO wt % (Ontario Geological Survey 2001). All 34 olivine grains recovered in this survey plot within the field defined by olivine xenocrysts from Ontario kimberlites (Figure 39). All 34 grains show depleted CaO concentrations and increased FO numbers.

Sample number	tot FO	tot FO	tot KIM FO	Estimate of FO grains in sample
	p	p(e)	c	tot KIM FO
SG-001	2	10	3	15

Table 4: Summary of samples in which the number of olivine grains was estimated based on analysis of a picked subset. (FO-forsteritic olivine; p-picked; p(e)-picked estimate; c-confirmed).

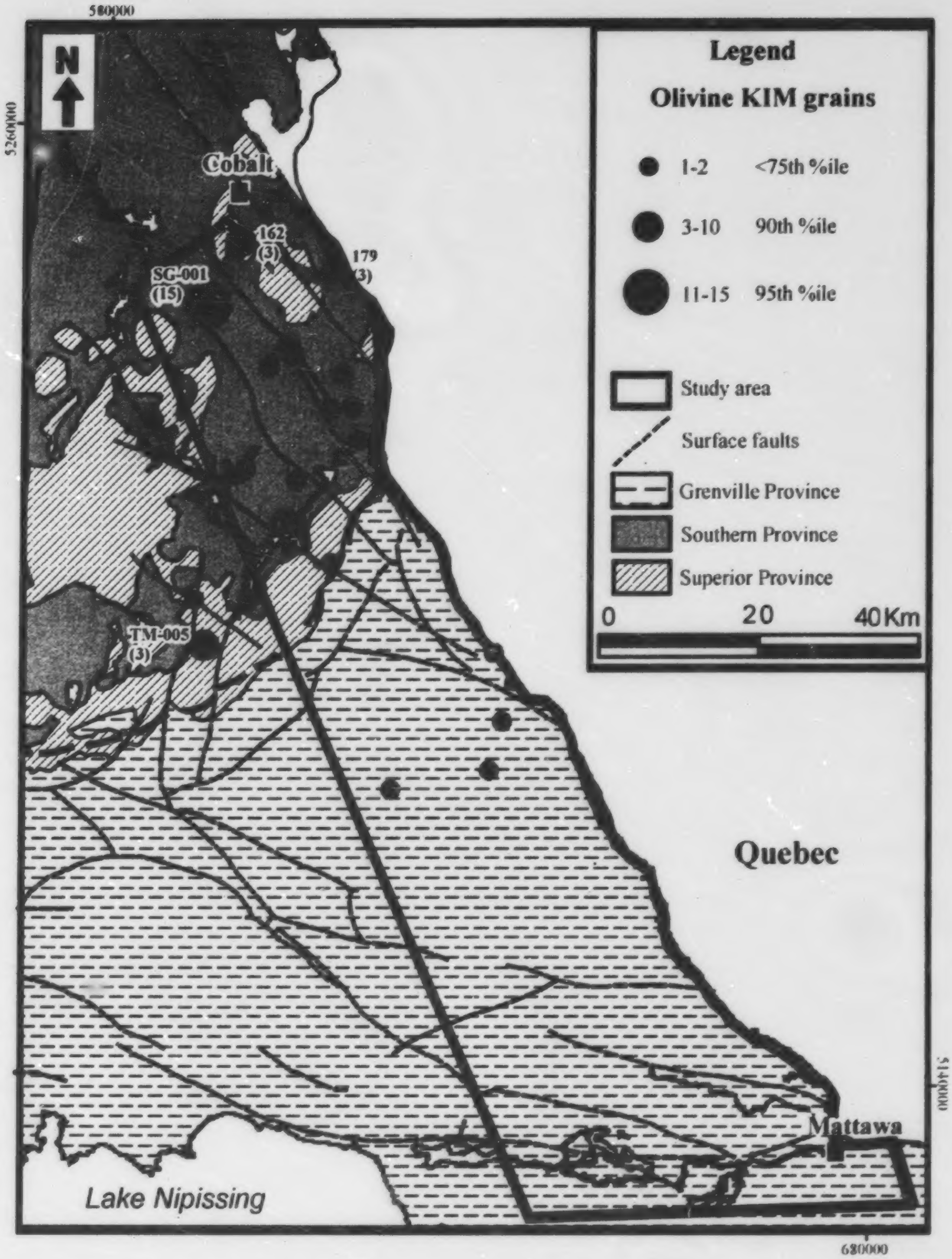

Figure 38: Regional distribution of olivine grains. Anomalous sites are labeled with the corresponding number of grains shown in brackets.

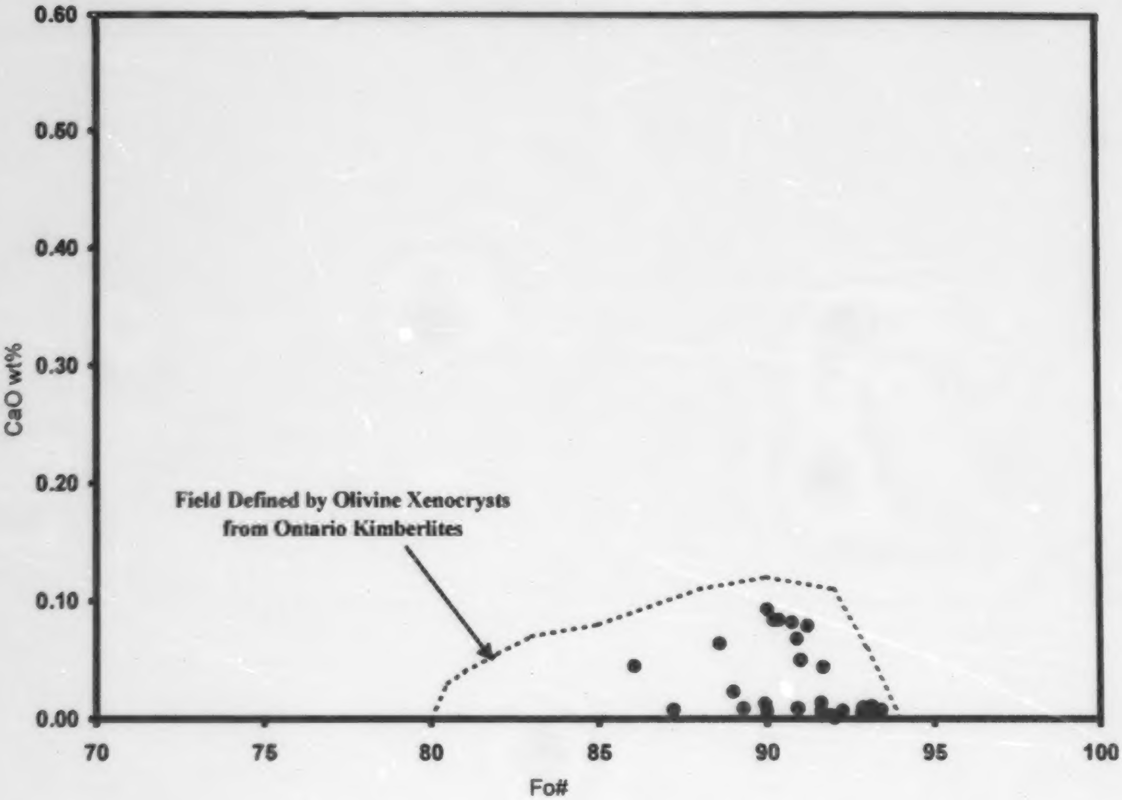

Figure 39: Fo# vs. CaO plot for olivines recovered in the Mattawa-Cobalt survey area.

TOTAL KIMS AND RECOMMENDATIONS FOR EXPLORATION

In examining the distribution and composition of kimberlite indicator minerals, several sites were identified as having anomalous numbers of KIMs. The exploration targets within the study area are based on sample sites containing a combination of significant KIMs such as G10 and G9 garnets, Mg-ilmenites, chromites, Cr-diopsides and olivine. Sample sites with single mineral anomalies should be considered with caution unless they occur in the vicinity of other anomalous sites.

Diamond inclusion chromites and G10 garnets are considered to be the most significant KIMs and the best indicators of diamond potential. Figure 40 summarizes the cumulative distribution of these significant KIMs. The grains tend to be distributed north of the Grenville Front with just 5 grains scattered south of this feature. A number of sites and areas that are considered favourable for kimberlite exploration can be outlined. The most significant trend of anomalous sites follows the Cross Lake and South Montreal River faults, perpendicular to the Grenville Front Tectonic Zone. These sites include 165, 253, 167, 169, 214, 212, and 246 where

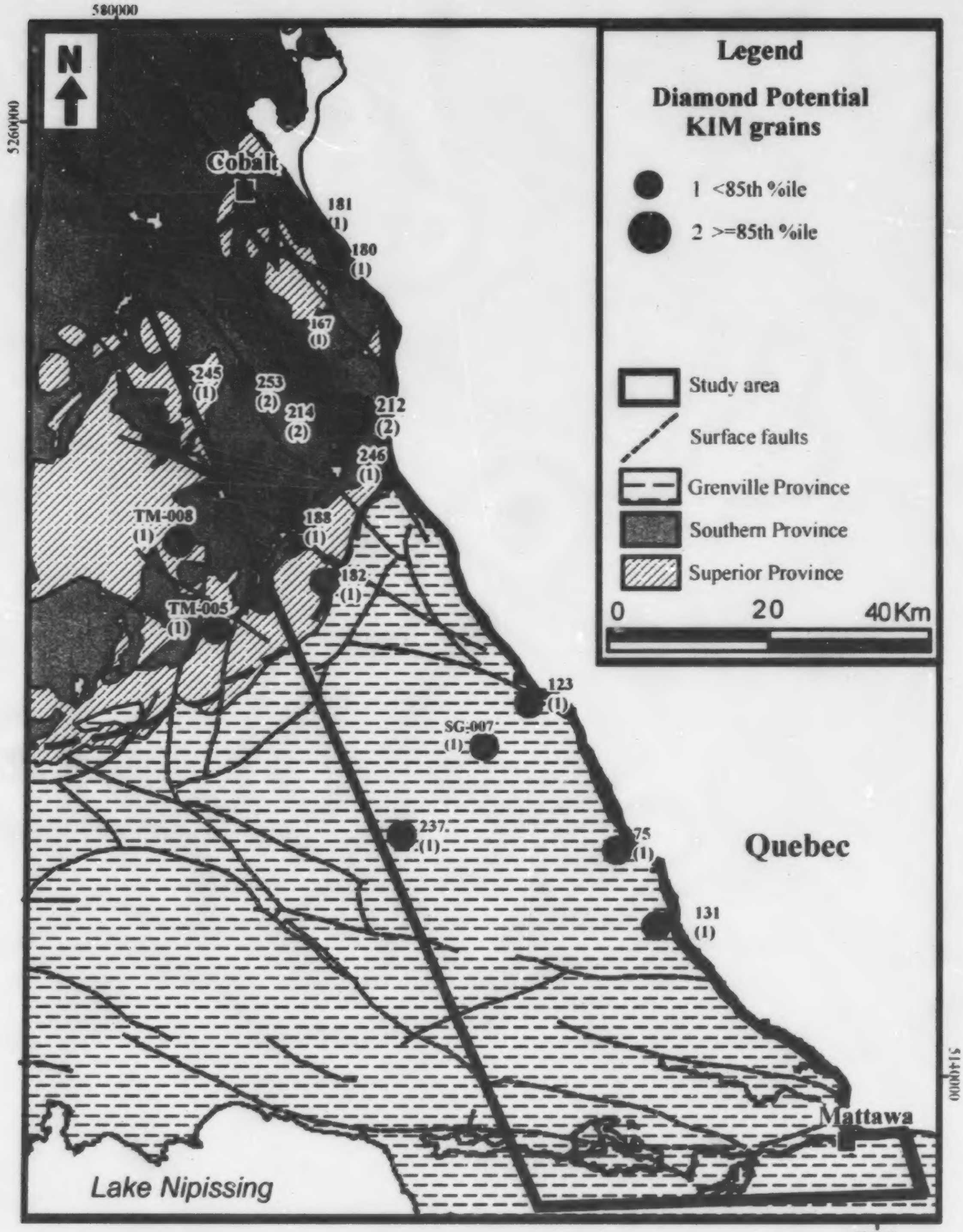

Figure 40: Regional distribution of total potential diamond KIM grains (G10 garnet and diamond inclusion chromite grains). Anomalous sites are labeled with the corresponding number of grains shown in brackets.

sites 253, 214 and 212 are most significant. A number of other anomalous sites are also noteworthy. Site 245 is situated on the Montreal River Main fault, adjacent to the previously mentioned faults. Samples 257 and 188 lie near or on the Net Lake fault and sample 182 lies near the intersection of the Net Lake fault and the Grenville Front Tectonic Zone. Samples 181 and 180 lie on the Lake Temiskaming West Shore fault. Till sample TM-008 lies on or near the Grenville swarm diabase dikes and till sample TM-005 lies at the intersection of 2 faults of the LTSZ. Samples SG-007, 123, 237, 75 and 131 are distributed through the Grenville Province in the southern part of the study area.

To further pinpoint anomalous sites, all possible KIMs and all possible KIMs including chromites of the overlap field have been plotted (Figures 41 and 42). Viewing the data in these additional ways results in the identification of a number of coincident anomalies apparent on both Figures 41 and 42. Anomalous sample sites include 180, 165, SG-001, 253, 214, 182, 225, 228, 135, 123 and TM-005. In Figure 41, sample sites 181, 144, 172, 212, 218, 14, 2 and 10 are also anomalous (above the 95th percentile) in total KIMs, however, these sites are only above the 90th percentile using the parameters for Figure 42. Regardless, the samples are still considered to be of significant interest.

A closer look at the local geology around the anomalous sites located north of the Grenville Front reveals the presence of Mesoproterozoic mafic intrusive rocks, more specifically the diabase dikes of the Sudbury swarm as well as the Paleoproterozoic Nipissing sills described as diabase sills and dikes and related granophyre. Samples that occur in close proximity to these intrusions include 181, SG-001, 144, 165, 167, 169, 212, 253 and 250. These intrusions may account for the observed heavy mineral signatures, however, the presence of G10 garnets and DI chromites in these areas suggests an alternate source. The Lake Temiskaming Structural Zone faults along which these intrusives were emplaced are likely deep seated, as the rocks are mafic and sourced from depth. For this reason, these faults present viable conduits for kimberlite or related rock emplacement. The other anomalous sites located north of the Grenville Front and not located in the vicinity of Mesoproterozoic mafic intrusives or Nipissing sills include 180, 214, 245, 246, 257, 172, 182, 188, TM-005 and TM-008. As mentioned previously, these sites fall in an area dominated by faults of the LTSZ which provide numerous pathways for the passage of kimberlites or related rocks. In addition, many orthogonal intersections of faults occur within the region enhancing the prospect of intrusions.

South of the Grenville Front, numerous KIM grains and possible KIM grains were identified as well as 5 potential diamond KIM grains. All sites at which potential diamond KIMs were recovered, except site 123, however, are anomalous either with 1 G10 garnet or 1 DI chromite per site. The only site at which potential diamond KIMs were recovered that may complement other KIM anomalies is site 123. This site is anomalous in G10 and G9 garnet grains as well as ilmenites. In general, the anomalous sites located within the Grenville Province consist primarily of possible chromite KIMs, Cr-diopside KIMs and ilmenite KIMs. These anomalies are, for the most part, located in close proximity to faults and orthogonal intersections that, again, provide avenues for the passage of kimberlites or related rocks. However, as stated earlier, 2 major anomalies, samples 225 and 228 that fall within the Grenville Province hold an abundance of ilmenite grains, 16068 and 4573 grains respectively. There are no other KIM grains associated with these samples. The MgO contents of ilmenite grains from both samples

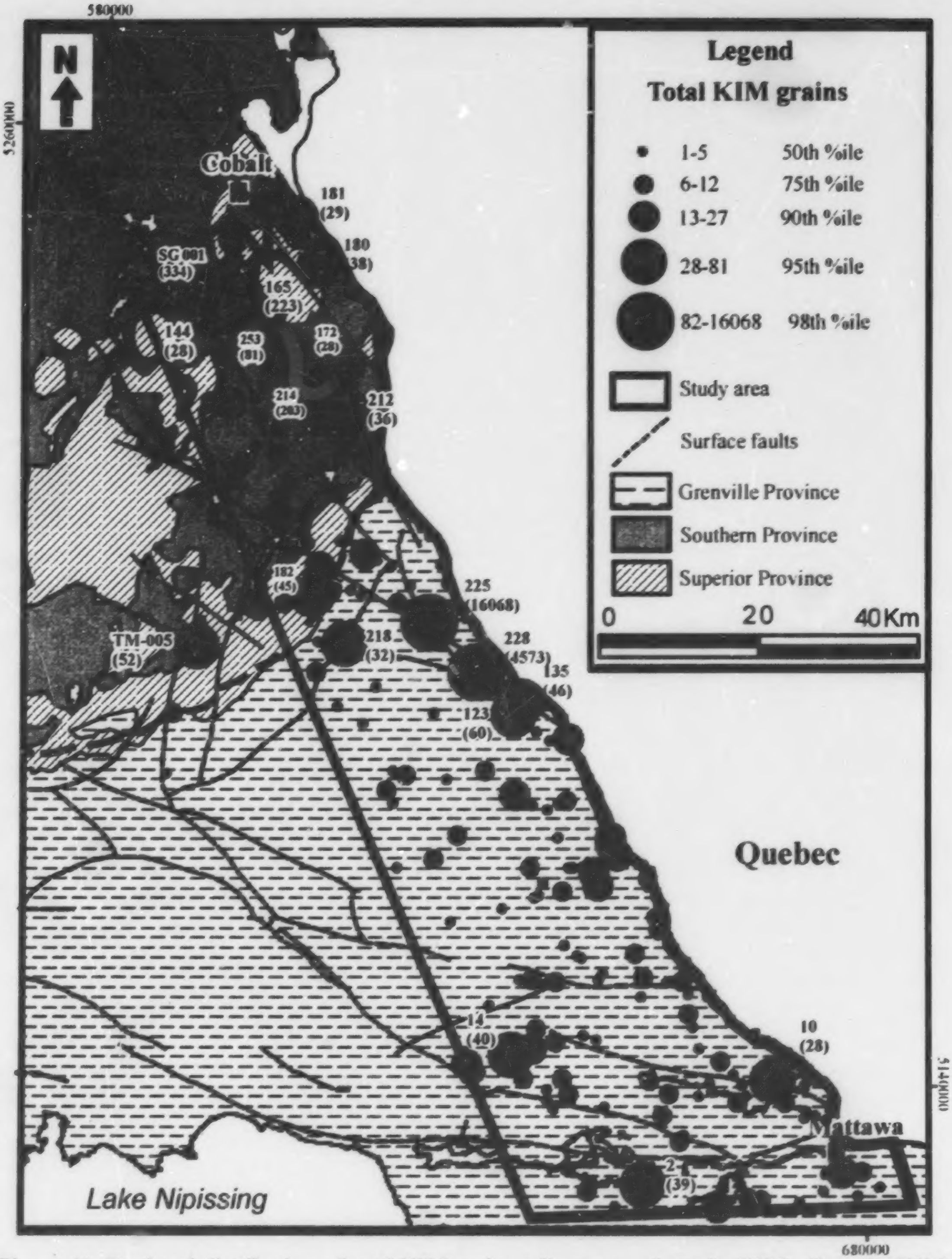

Figure 41: Regional distribution of total KIM grains (all garnets, chromite KIMs, ilmenite KIMs, Cr-diopside KIMs and olivine KIMs). Anomalous sites are labeled with the corresponding number of grains shown in brackets.

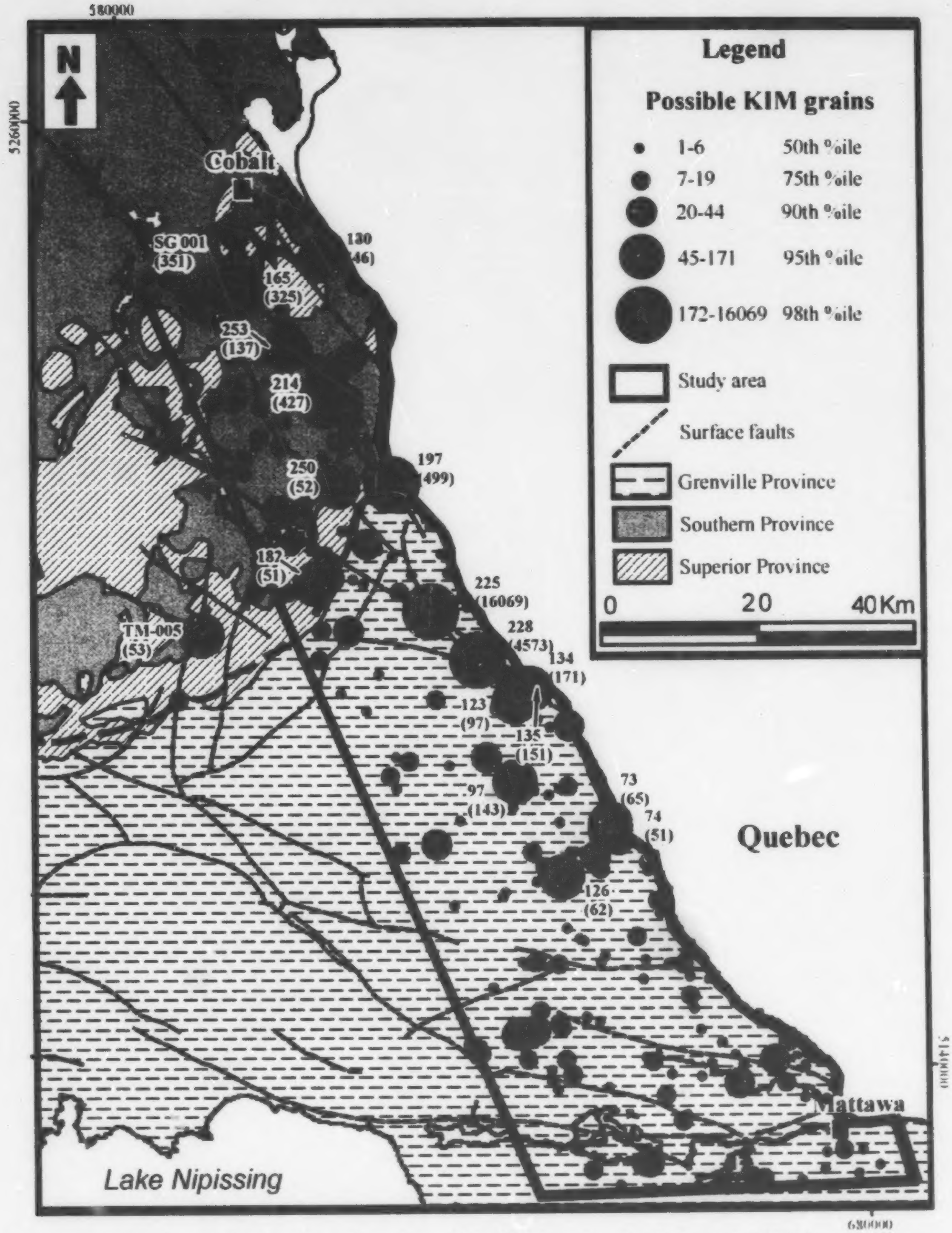

Figure 42: Regional distribution of total possible KIM grains (includes total KIMs as well as overlap field chromites). Anomalous sites are labeled with the corresponding number of grains shown in brackets.

are at best marginal for kimberlite. It is unlikely that these numerous ilmenites are reflective of a kimberlitic source, but rather, have a different origin. Sample site 225 is situated very close to the intersection of 2 faults. Sample site 228 is located along the same trend and is located over a metamorphosed iron formation rich in iron-magnesium silicate minerals. Such a bedrock type may have provided the source for the numerous ilmenite grains found in these samples. The large number of chromite anomalies found in the southern portion of the survey area, could be due, in part, to the fact that chromite is the most resistant KIM species and therefore could have undergone a second cycle of reworking and transport that may have dispersed them southward to the Mattawa River system. Alternatively, many of the chromite grains are classified as possible chromite KIMs and may not be associated with kimberlite at all.

Because of its susceptibility to weathering, the presence of Cr-diopside can be used as a measure of proximity to source. This mineral disappears quickly once transported from source. Therefore, its recovery in a sample may suggest local derivation. The Al-Na-Cr ternary plot for Cr-diopside indicated that a large number of grains could be classified as kimberlitic. When the grains were plotted, all anomalous sites were located in the Grenville Province. As the anomalous sites do not coincide with any other anomalous kimberlite indicator minerals, it is suggested that their source is a rock type other than kimberlite. To further assess proximity to source, pebble lithology studies can be used. The number of rock types belonging to different formations and provinces that occur in the study area makes it difficult to differentiate pebble sources. All rock types found as pebbles in the modern alluvium samples are present in the study area thus providing a level of support for the assertion that transport distances are limited. Table 5 summarizes the percentages of pebble lithologies present in the anomalous samples shown in Figures 41 and 42.

The types of surficial deposits in the study area can provide some indication of local or distal derivation of the KIMs in the anomalies identified. Samples SG-001, SG-007, 75, 131, 135, 144, 165 and 228 are close to or situated within deposits of glaciofluvial outwash. These deposits may consist of distally derived material and heavy minerals could have travelled some distance from source. Similarly, site 14 is located near an area of glaciofluvial ice-contact deposits and sites 180, 181, 214 and 197 are located near or within areas of glaciolacustrine deposits. However, surrounding these sample sites are sites which reveal anomalous KIM values in areas that do not incise glaciofluvial deposits, inferring that local derivation could be probable. If derivation of KIMs is from a kimberlite boulder located upstream, deposited in the area by glacial activity, the source, however, could be distal. Nonetheless, consistency among samples with KIM anomalies would suggest local derivation. Generally, local derivation can be inferred due to the bedrock-dominated nature of the study area.

Sample	Rock Type	FI %	MI %	GN %	FMV %	MMV %	SED %	OTH %	Total Volcanics	Total Intrusives	Total Sedimentary
01-JR-P-002	FIG	45	45	0	0	0	4	5	0	91	4
01-JR-P-010	FIG	35	57	0	0	0	6	2	0	92	6
01-JR-P-014	MIG	67	29	2	0	2	0	0	2	96	0
01-JR-P-073	GN	57	38	0	0	0	0	4	0	96	0
01-JR-P-074	GN	0	69	0	0	0	23	8	0	69	23
01-JR-P-097	GN	48	0	3	0	0	32	17	0	48	32
01-JR-P-123	GN	85	0	0	4	2	8	2	6	85	8
01-JR-P-126	MIG	46	46	0	0	0	0	8	0	92	0
01-JR-P-134	MIG	58	25	0	0	0	11	6	0	83	11
01-JR-P-135	MIG	73	2	0	4	8	12	0	12	76	12
01-JR-P-144	MI	2	0	0	7	32	59	0	39	2	59
01-JR-P-165	HSG	13	10	0	0	0	77	0	0	23	77
01-JR-P-172	HSG	32	0	0	10	36	12	10	46	32	12
01-JR-P-180	HSG	28	0	0	0	9	64	0	9	28	64
01-JR-P-181	HSG	29	8	0	0	0	41	22	0	37	41
01-JR-P-182	FI	16	0	0	14	9	54	7	23	16	54
01-JR-P-197	MIG	7	15	0	0	0	67	11	0	22	67
01-JR-P-212	HSG	7	0	0	2	39	52	0	41	7	52
01-JR-P-214	HSG	0	0	0	55	9	30	6	64	0	30
01-JR-P-218	MIG	26	0	0	0	26	41	7	26	26	41
01-JR-P-228	MIG	92	0	0	0	8	0	0	8	92	0
01-JR-P-250	FI	6	0	0	12	0	83	0	12	6	83
01-JR-P-253	MI	19	10	0	0	29	42	0	29	29	42
01-JR-SG-P-001	MI	0	0	0	0	0	100	0	0	0	100
01-JR-TM-P-005	FI	27	31	0	0	0	42	0	0	58	42

Table 5: Pebble lithology percentages for anomalous samples identified in Figures 41 and 42. No pebbles were available for collection at sample site 225. (Abbreviations for rock types: GN-gneiss of metasedimentary origin; MIG-migmatitic rocks and gneisses; HSG-Huronian Supergroup: MI-mafic intrusive; FI-felsic intrusive; FIG-felsic igneous rocks; MMV-mafic metavolcanics; FMV-felsic metavolcanics; SED-sedimentary rocks; OTH-other).

PHYSICAL CHARACTERISTICS OF KIMBERLITE INDICATOR MINERALS

The shape of a rock particle can be expressed in terms of 3 independent properties: form or shape, roundness and surface texture (Barrett 1980). Form includes aspects of elongation or flatness and sphericity of rock particles. Roundness is measured as the ratio of the average radius of corners of a grain to the radius of maximum inscribed circle. The roundness of a grain can be expressed qualitatively as ranging from angular and subangular to subrounded and rounded. Surface texture includes aspects of the markings on the grain caused by contact with other rocks (Stone 2001).

In the study area, where the terrain has been affected by multiple ice flow directions, it is a complex task to reconstruct the transport history of indicator minerals. Drift exploration using clasts and/or heavy minerals is one way to solve this problem; the direction and distance of various ice lobes are unknowns that can be solved by the application of geoscience principles. Further complexities arise in consideration of minerals that occur in glaciofluvial or glaciolacustrine deposits. These minerals may be displaced significant distances by water that flowed from melting glaciers or moved along the shores of glacial lakes. As well, the movement of water down modern rivers or along the shore of a lake (Stone 2001) can displace mineral grains great distances.

Although knowledge of ice movement is the most important factor in determining the place of origin for a mineral grain, some additional information on the distance and mechanism of transport can be gained from analysis of the surface characteristics of the grain (Stone 2001). Mineral grains displaced by ice movement and water flow are likely to be damaged or altered along the way. Analysis of surface markings can provide insight into the distance and means by which the grains has moved (Stone 2001).

When looking at physical characteristics of kimberlite indicator mineral grains, it is necessary to focus on mineral grains that can be positively identified as mantle derived. Cr-pyrope garnets are the most definitive KIM since these minerals occur only in high pressure environments. Because of this, it was decided that the shape of the garnet population should be investigated in order to try to determine secondary processes that may have had an impact on the transportation of these minerals from source. A total of 871 garnets from the study area were confirmed by microprobe analysis, of these, 810 were confirmed to be kimberlitic. Due to budgetary and time constraints, a random selection of 182 or 21% of the total garnet grain number was photographed using a scanning electron microscope producing backscatter electron images. These images provide good grain shape definition, however, they provide limited information regarding grain texture.

Close examination of the 182 grains indicates that the majority of the grains in both the 0.25 to 0.5 mm and 0.5 to 1.0 mm size ranges are angular to subangular. The grains are consistently asymmetric and characterized by pitted surfaces (Figure 43 b, e) in combination with large, fresh conchoidal fractures (Figure 43 d, e) and chipping along the fractured edge. There are, however, a very small percentage of these grains (4%) that, although are not entirely round do, in fact, display some rounding on various edges as can be seen in Figure 44 d. This rounding is seen in conjunction with the larger conchoidal fractures and pitted surfaces. This suggests a number of possibilities. The angular grains, could, in fact be pieces of a larger rounded garnet grain that has, as a result of stresses it incurred within the kimberlite pipe combined with glacial and stream transport, been broken into smaller fragments, resulting in the angular and abraded grains shown here. However, the grains may also have been liberated as individual, independent, round or angular grains from the kimberlite and through several stages of transport, have been altered to their current shape. The pitted surfaces suggest either weathering or local, gentle abrasion as a result of grains coming into frequent contact with each other, perhaps in a low energy environment. The larger conchoidal fractures resulting in smooth surfaces with sharp edges suggest a dramatic event within a high energy environment. Subglacial transport and activity would provide such an environment where the grain could be crushed or broken. The small percentage of grains with rounded edges or edges with chipping or microfractures suggests a final transport environment causing particle wear such as that found in a fluvial environment.

The brittlenss of the pyrope garnet grain is another factor that needs to be taken into consideration. Typically, a well rounded grain suggests transport over long distances by water or wind; however, brittle minerals tend to readily break apart into angular fragments destroying the

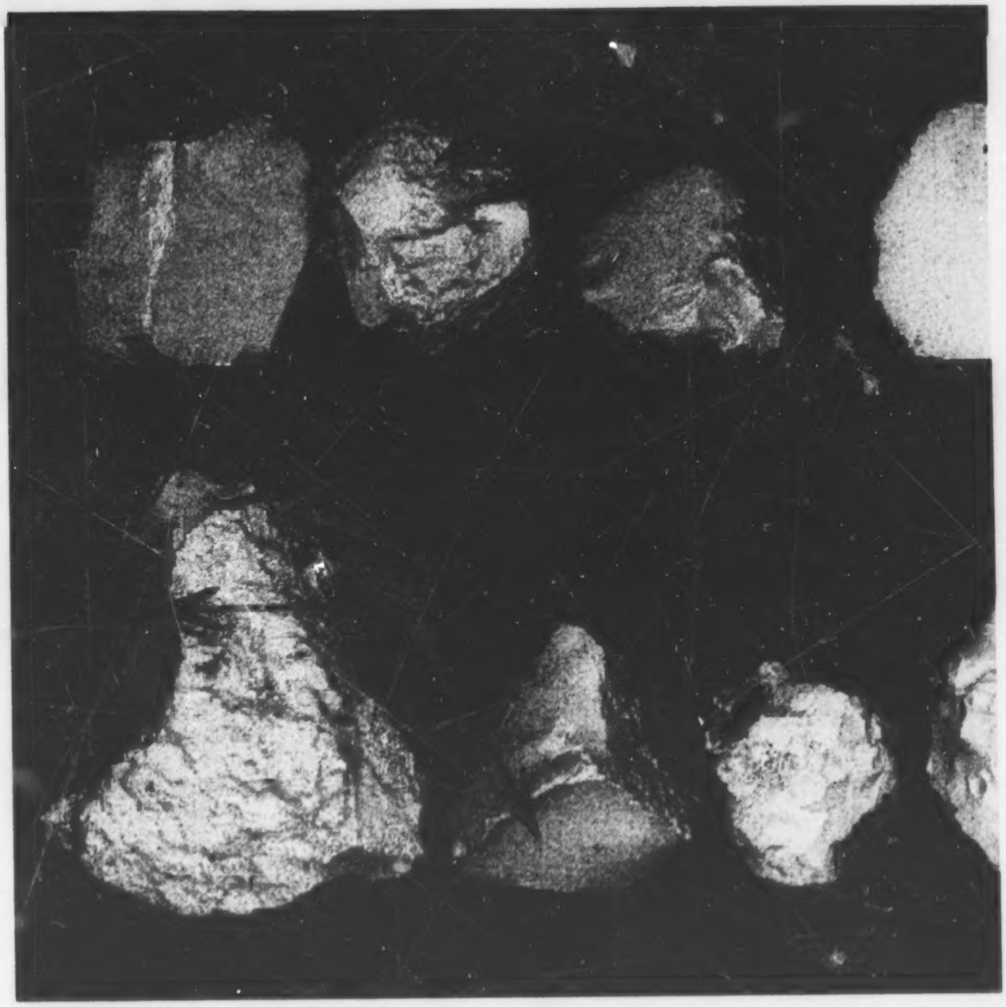

Figure 43: Scanning electron microprobe images illustrating shapes and textures of garnet grains isolated from various samples.

transportation record, which is recorded in the shapes and decorated surfaces of the original grains (Stone 2001). Several studies (Averill and McClenaghan 1994; Dredge et al.1996) show that pyrope occurs mainly as angular fragments in till and glaciofluvial deposits. Given that 127 of the 182 grains photographed were pyrope garnets, the evidence suggests that the observations confirm that pyrope does behave in a brittle manner under the transport conditions present in a glacial/post-glacial environment. The brittle nature of pyrope garnet in combination with the shape characteristics of such a small percentage of grains from a limited number of sample sites may provide only preliminary information regarding proximity to source. Further detailed investigation of pyrope garnets, as well as other kimberlite indicator minerals, is required before physical characteristics of grains can be used with much confidence in assessing proximity to source.

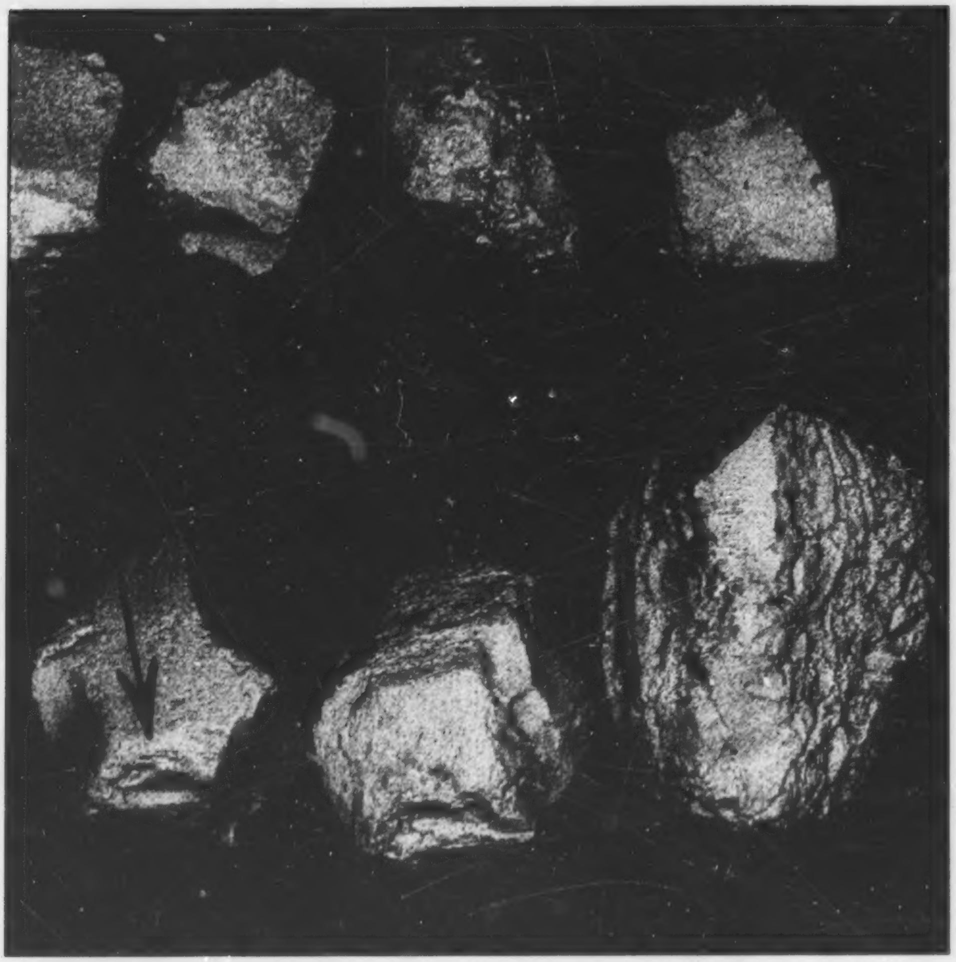

Figure 44: Scanning electron microprobe images illustrating shapes and textures of garnet grains isolated from various samples.

METAMORPHIC OR MAGMATIC MASSIVE SULPHIDE INDICATOR MINERALS

Metamorphic/magmatic massive sulphide indicator minerals (MMSIMs®) are stable heavy minerals that occur in: alteration zones associated with volcanogenic massive sulphide deposits in high grade terrains; in magmatic Ni-Cu sulphide deposits; and in skarn and greisen deposits (Averill 1999). The heavy mineral assemblages associated with each of these deposits are listed in Table 6. Identifying MMSIM® minerals in overburden deposits is useful as they are: coarse-grained; unique to the types of mineralization listed above; visually distinctive; easy to concentrate due to their specific gravity (>3.2); amenable to paramagnetic separation; and they are relatively resistant to weathering in the secondary environment (Averill 1999).

Common mineral associations in VMS type dispersion trains are gahnite-barite, chalcopyrite-spessartine (Mn epidote), gahnite-chalcopyrite-staurolite and red rutile-spinel-kyanite (or sillimanite). Gahnite is probably the most important MMSIM® associated with VMS type dispersions since it is enriched in the ore metal Zn and is extremely stable in the secondary environment. Other MMSIMs associated with VMS deposits include kyanite, sillimanite, staurolite and orthopyroxene. Magmatic Ni-Cu indicator minerals are characterised by distinctive Cr-rich phases such as Cr-diopside, chromite, uvarovite and Cr-rutile (Ontario Geological Survey 2001). Other phases associated with these deposits include chalcopyrite, forsteritic olivine, Mg-orthopyroxene and PGE alloys (Ontario Geological Survey 2001).

Indicator Mineral	MVMS	Mag Ni-Cu	Skarn	Griesen
chalcopyrite	▨	▨	▨	▨
chromite		▨		
corundum	▨			
Cr-rutile	▨	▨		
foresteritic olivine			▨	
gahnite	▨			
grossular			▨	
kyanite	▨			
low Cr-diopside		▨		
molybdenite	▨	▨	▨	▨
Mn-epidote	▨			
native gold	▨		▨	
olivine		▨		
orthopyroxene	▨	▨		
pyrite	▨	▨	▨	▨
sillimanite	▨			
spessartine	▨			
staurolite	▨			
uvarovite		▨		

Table 6: List of indicator minerals found in the survey area and the associated base metal mineralization style (after Averill 1999). The presence of a mineral species is indicated by a shaded rectangle. MVMS: metamorphosed volcanosedimentary massive sulphide mineralization; Mag Ni-Cu: magmatic nickel-copper massive sulphide mineralization.

Gahnite

The zinc spinel, gahnite ($ZnAl_2O_4$) is a useful indicator mineral in exploration for base metal deposits and is stable in the oxidizing surficial environment (Morris et al. 1997). Gahnite is associated with 4 geological environments. These include: metamorphosed massive sulphide deposits, aluminous metasediments, pegmatites and marbles. The presence of gahnite in a deposit may result from one or a combination of the following mechanisms: desulphidation of sphalerite during metamorphism under high fO_2; reaction between kaolinite (aluminous clay) and absorbed ZnO; reaction between Zn associated with organic material and sulphur to form ZnS, which subsequently reacts with kaolinite; breakdown of Zn bearing silicates (biotite and staurolite) during prograde metamorphism; precipitation from hydrothermal fluids; and contamination of a felsic melt by Zn-enriched wallrock (Dunlop 2000).

Compositional differences between gahnites from the various environments make it possible to classify the mode of occurrence using electron microprobe data. Gahnites from polymetallic deposits exhibit MgO concentrations that are typically >2 wt%, whereas those from rare element pegmatites and peraluminous granites tend to have MgO concentrations that are <2 wt% (Dunlop 2000, Morris et al. 1997). However, compositional overlap between these groups does exist.

Pegmatites and peraluminous granites result from late stage fractional crystallization thus removing MgO during earlier crystallization of mafic minerals. Therefore, gahnite crystals that formed would reflect the Mg-depleted nature of the parent magma (Batchelor and Kinnaird 1984). Rare earth pegmatites are more felsic than peraluminous granite resulting in a lower MgO limit, as there is less chance of any remnant MgO in the melt. Consequently, other crystallizing phases are lacking in these felsic melts that incorporate Zn into their structures (Dunlop 2000). In metamorphic terrains, Mg is remobilized by the breakdown of mafic phases such as biotite and amphibole and could be incorporated into the crystallizing gahnite, increasing it's MgO content (Batchelor and Kinnaird 1984). Additionally, lower ZnO values may result due to higher fS_2 in metamorphic environments, therefore, sphalerite is preferentially deposited (Dunlop 2000). Lower ZnO values in gahnites originating from metamorphosed massive sulphide deposits may indicate more ZnS and potentially, higher amounts of ore.

A total of 12 gahnite grains were recovered and sent for microprobe analysis. The data shows that 1 grain has a MgO concentration >2 wt % and 11 have MgO concentrations <2 wt %. The fact that the majority of the grains are depleted in MgO suggests that the source is likely rare earth pegmatite or peraluminous granite. To further determine the possible origin of these gahnite grains, the data was plotted on a ternary diagram of ZnO, FeO and MgO (Figure 45). The gahnite grains are Zn-enriched and MgO depleted, falling in the area generally representative of rare earth pegmatites (Morris et al. 1997). However, samples MA-008-010 and MA-097-060 appear to originate from peraluminous granite. Regional gahnite distribution is displayed in Figure 46. Analysis of gahnite grains obtained from the Mattabi volcanogenic massive sulphide deposit occurrence displays similar compositions to the gahnites recovered from this survey (Morris et al. 1997). Metamorphosed VMS occurrences are likely to be the source of the gahnites found in the study area as the presence of pegmatitic rocks in the study area is minimal.

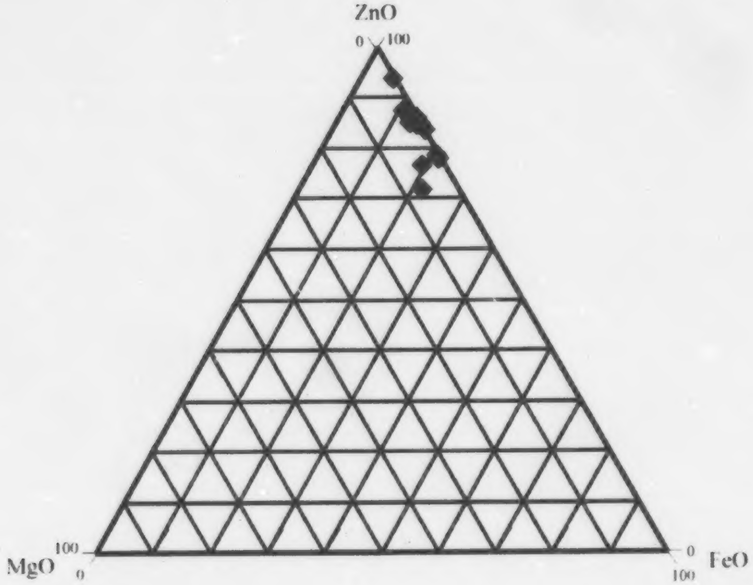

Figure 45: Ternary ZnO/MgO/FeO plot showing gahnite grain compositions.

Cr-diopside

Averill (1999) has suggested that low Cr-diopsides are an important indicator mineral for magmatic Ni-Cu mineralization with 2 notable examples of this association occurring at Thompson, Manitoba and Outokumpu, Finland. Clinopyroxene is one of the first minerals to crystallize from a mafic/ultramafic melt. If its formation precedes chromite, Cr in the melt may initially be incorporated into the diopside structure. However, clinopyroxene crystallization occurring after chromite can still produce Cr-diopside. The silicate melt will eventually be Fe-depleted due to the formation of Ni-Cu minerals and chromite crystallization will cease, allowing any excess Cr to be included in diopside. Only those Cr-diopsides plotting outside the kimberlite field defined on a Cr_2O_3-Al_2O_3-Na_2O ternary diagram were considered as potential MMSIMs® (Figure 30). These grains were further subdivided based on their Cr_2O_3 wt% values. Cr-diopsides with less than 1.3 wt% Cr_2O_3 were considered to be MMSIMs® (Morris et al. 2000).

Chromite

During fractional crystallization of mafic and ultramafic magmas, chromite is one of the earliest minerals to appear and often forms layered cumulates at the base or within the solidified melt. Chromite is a primary component of many mafic and ultramafic layered intrusions that are hosts to Ni-Cu mineralization for instance: the Bushveld Complex, South Africa; Skaergaard Intrusion, Greenland; Stillwater Complex, Montana; and Muskox Intrusion, NWT. As well,

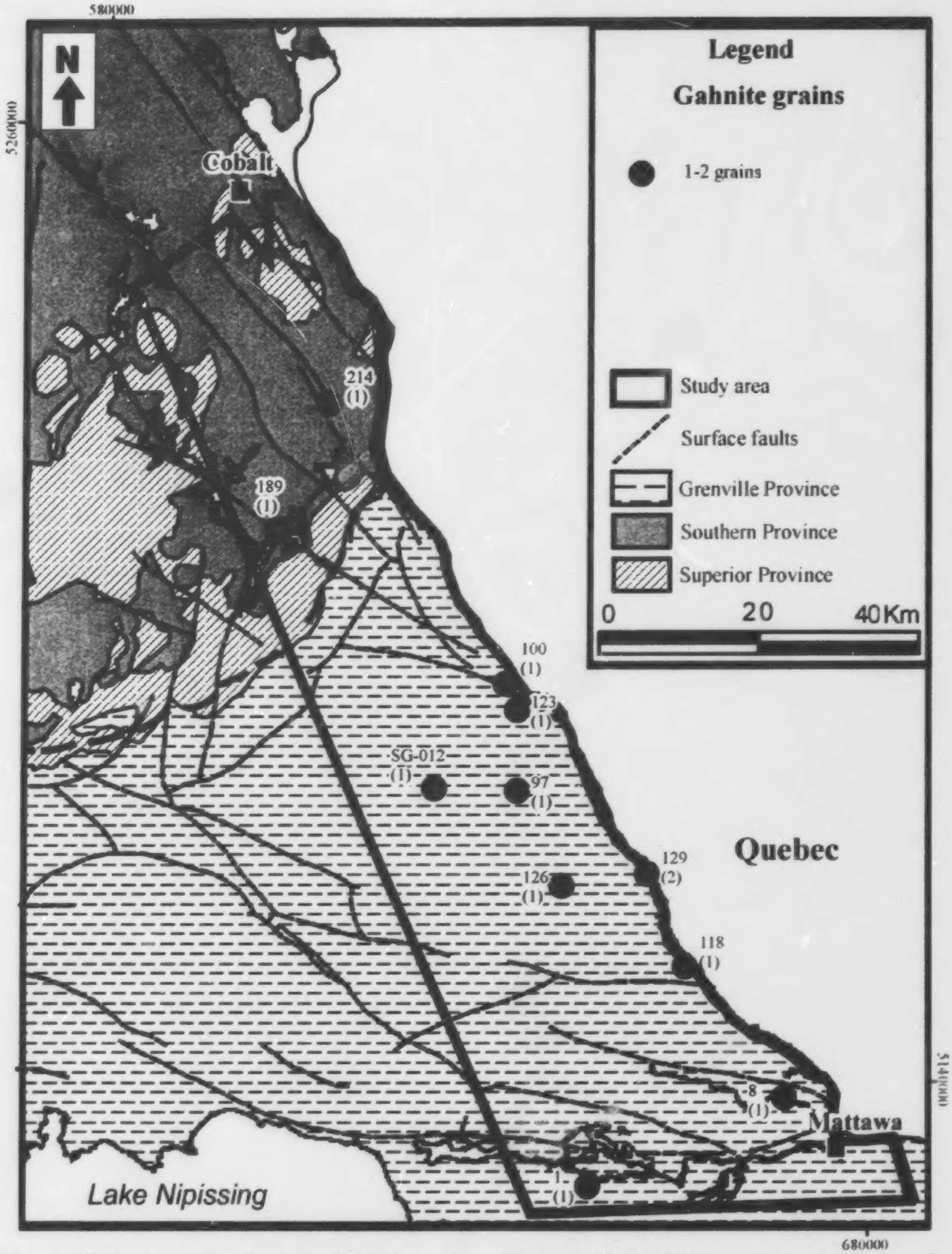

Figure 46: Regional distribution of gahnite grains. Sites at which gahnite grains were recovered are labeled with the corresponding number of grains shown in brackets.

chromite occurs in komatiitic flows that host Ni-sulphide mineralization (Kambalda, Australia; Nor'ilsk, Russia).

Those chromites that plot in the non-lamproitic/kimberlitic field and the overlap field of the Fipke et al. (1995) Cr_2O_3-TiO_2 plot were considered to be MMSIMs®.

OTHER METAMORPHIC/MAGMATIC MASSIVE SULPHIDE INDICATOR MINERALS

The formation of Ni-Cu sulphide minerals removes Fe from crystallizing mafic/ultramafic melts, resulting in the formation of Mg-rich olivines and Mg-rich orthopyroxenes. The conclusion of chromite crystallization resulting from the lack of Fe allows excess Cr in the melt to be incorporated into red rutile and uvarovite (Averill 1999).

Picking results for MMSIMs® were reported in 3 ways: actual grain counts (e.g., chalcopyrite or low Cr-diopside), percentages of the total fraction size (e.g., orthopyroxene) or as trace amounts (e.g., staurolite). In order to determine the distribution of sites with anomalous MMSIMs®, a ranking system was designed to analyse the data in a uniform manner. Minerals present in trace amounts were assigned values representing half of the lowest reported amount, 0.25%. The sites were than ranked from 4 to 0 depending upon the number of anomalous (anomalous defined as >95th percentile) MMSIMs® determined for each site. For example, sample MA-214 has the highest number (4) of different MMSIMs®, (low Cr-diopside, chromite, gahnite and staurolite). Site MA-002 was given a ranking of 3 as it consisted of 3 different types of anomalous MMSIMs® (chromite, chalcopyrite and kyanite). Results of this ranking system, were used to produce an MMSIM® proportional dot diagram summarizing the distribution of those sites with the highest number of anomalous MMSIMs®. Above the 98th percentile, 22 sites ranked at 3 or 4, 138 sites ranked above the 95th percentile, at 1 or 2 (Table 7). The regional distribution of the anomalies is shown in Figure 47. Regional chalcopyrite distribution is displayed in Figure 48, in which, 13 sites were identified as anomalous, 6 above the 98th percentile and 7 above the 95th percentile (Table 8).

Anomalous MMSIM® sites are distributed evenly throughout the study area. The anomalies observed north of the Grenville Front Tectonic Zone could result from various geological environments. Polymetallic occurrences of metals including copper, cobalt, silver, gold, zinc, lead and nickel are either hosted within the margins of the Nipissing diabase or within sedimentary rocks of the Coleman Member adjacent to diabase sills. The mafic and ultramafic rocks of the Nipissing Diabase, Sudbury swarm and related intrusive rocks may have pods of magmatic Ni-Cu massive sulphides. As well, small quartz-carbonate veins containing anomalous values of Cu, Ag, Co ± Au, Ni have been reported in the region (Born 1989). The emplacement of Archean mafic and felsic intrusives or Proterozoic mafic intrusives may have liberated hydrothermal fluids that remobilized metals from the metavolcanics or Huronian sediments. Consequently, these fluids could have deposited the sulphides in quartz-carbonate veins in any of the rock formations present in the vicinity as they travelled along structural contacts or fault zones. Later metamorphism could have resulted in the genesis of similar veins. The Archean felsic metavolcanics north of the Grenville Front are associated with metamorphosed VMS occurrences (Born 1989). Sulphide veins in rhyolites and related felsic

Sample Number	low-Cr diopside	Chromite	Cpy	Molybdenite	Py	Gahnite	Cr-grossular	Mn-epidote	corundum	Red Rutile	Uva	% Gth	% Ky	% Sil	% St	% Sps	% Fay	% Opx	Rank	Rock Type
01-JR-MA-001	0	0	0	0	0	1	1	0	0	2	1	0	60	0	0	0.25	0	0.25	4	FIG
01-JR-MA-214	8	91	0	0	5	1	0	0	0	0	0	0.25	0.25	0.25	12	0.25	0	0.25	4	HSG
01-JR-MA-002	3	0	18	0	5	0	0	4	0	0	0	0	70	0.25	0.25	0.25	0	0	3	FIG
01-JR-MA-042	0	0	0	0	1	0	0	13	0	0	0	0	15	0.5	0	0	0	0	3	GN
01-JR-MA-048	0	0	0	0	300	0	0	15	0	0	0	0	15	0	0.25	0	0	0	3	MIG
01-JR-MA-077	0	0	2	2	300	0	0	7	0	0	0	0	80	0.25	0.25	0	0	0	3	GN
01-JR-MA-078	0	0	0	3	0	0	0	8	0	6	0	0	60	0	0.25	0	0	0	3	MIG
01-JR-MA-106	0	0	0	0	5	0	0	11	0	40	0	0	75	0.25	0.25	0.25	0	0	3	GN
01-JR-MA-123	5	28	0	0	10	1	0	0	0	12	0	0	2	0.25	4	0.25	0	2	3	GN
01-JR-MA-129	1	0	2	0	8	2	2	6	0	9	2	0.25	10	0	1	0.25	0	0.25	3	MIG
01-JR-MA-135	14	42	3	0	20	0	0	0	0	11	0	0.25	3	0	3	0.25	0	0.25	3	MIG
01-JR-MA-162	13	1	12	0	0	0	0	0	1	0	0	0	0	0	0.25	0.25	0	0.25	3	MMV
01-JR-MA-165	15	50	1	0	0	0	0	0	0	0	0	2	0.25	0.25	1	0.25	0	3	3	HSG
01-JR-MA-180	24	8	2	0	300	0	0	0	0	0	0	0.25	0	0.25	12	0	0	0.25	3	HSG
01-JR-MA-189	4	0	0	0	15	1	0	0	0	0	0	0.25	0.25	0	15	0	15	0	3	HSG
01-JR-MA-197	0	62	6	5	15	0	0	0	0	1	0	0	0	0	5	0	0	0	3	MIG
01-JR-MA-223	0	0	1	3	200	0	1	0	0	0	1	0	0	0	1	0.25	0	0	3	MIG
01-JR-MA-233	0	3	3	7	400	0	0	0	0	0	0	0	0	0.25	12	0	0	0	3	MIG
01-JR-MA-236	1	1	7	1	450	0	0	2	0	0	0	0.25	1	0	15	0	0	0	3	MIG
01-JR-MA-241	1	0	22	1	2000	0	0	1	0	0	0	0.25	85	0.25	0.25	0	0	0	3	GN
01-JR-MA-254	9	7	0	0	2	0	1	0	0	0	1	0.25	0.25	0	3	0.25	0	0.25	3	HSG
01-JR-SG-007	1	21	0	0	1500	0	0	0	0	1	0	1	1	0	15	0	0	0	3	GN

Table 7: Summary of MMSIMs®picked and anomalous MMSIMs® sites. Actual grain numbers are shown unless labeled otherwise (e.g., %). Samples ranked 3 and 4 fall within the 98th percentile.
For abbreviations of MMSIM® types see Appendix I (this report)
(Abbreviations of rock types: FIG-felsic igneous; HSG-Huronian Supergroup; GN-gneiss; MIG-migmatitic; MMV-mafic metavolcanic)

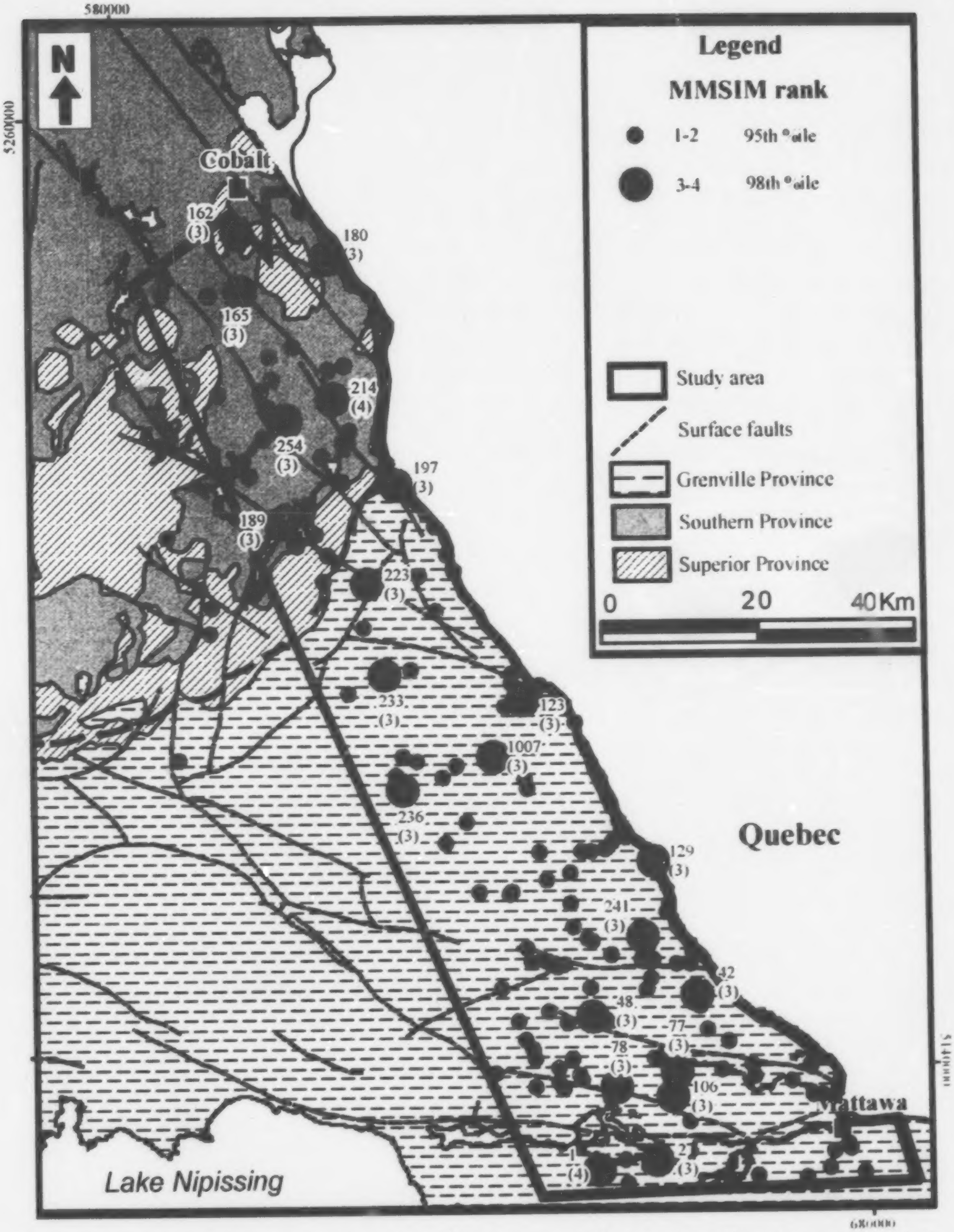

Figure 47: Regional distribution of MMSIM® indicators. Labeled anomalies, shown in brackets, were determined by level of rank (described in text)

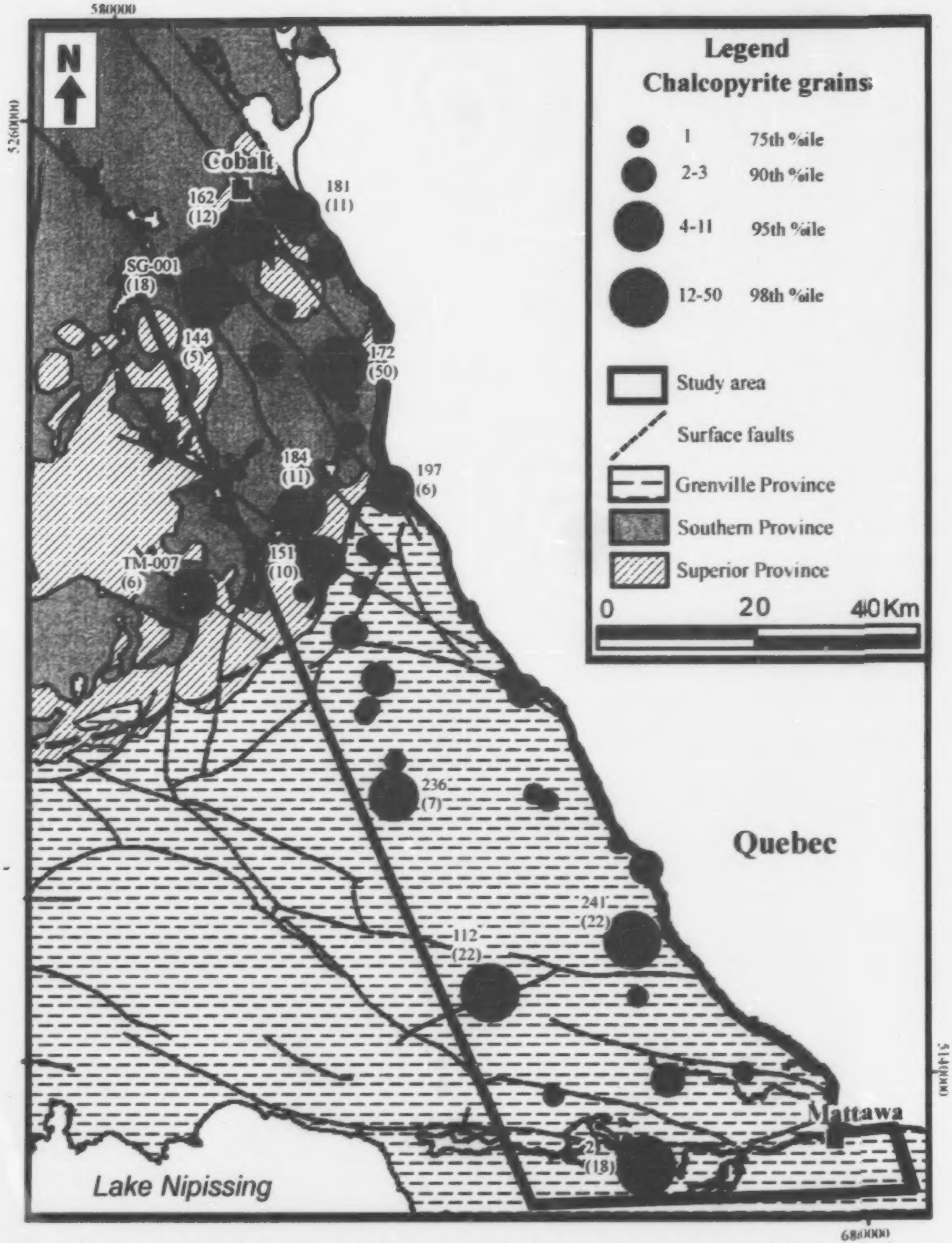

Figure 48: Regional distribution of chalcopyrite grains. Anomalous sites are labeled with the corresponding number of grains shown in brackets.

Sample Number	Cpy grains	Percentile	Rock Type
01-JR-MA-002	18	98th	FIG
01-JR-MA-162	12	98th	MMV
01-JR-MA-172	50	98th	HSG
01-JR-MA-241	22	98th	GN
01-JR-SG-001	18	98th	HSG
01-JR-MA-112	22	98th	MIG
01-JR-MA-144	5	95th	MI
01-JR-MA-151	10	95th	FI
01-JR-MA-181	11	95th	HSG
01-JR-MA-184	11	95th	HSG
01-JR-MA-197	6	95th	MIG
01-JR-MA-236	7	95th	MIG
01-JR-TM-007	6	95th	FI

Table 8: Summary of anomalous chalcopyrite sites. (Abbreviations of rock types: FIG-felsic igneous rocks; MMV-mafic metavolcanic; GN-gneiss; HSG-Huronian Supergroup; FI-felsic intrusive; MI-mafic intrusive; MIG-migmatitic).

volcanic rock types may represent zones of volcanogenic massive sulphides with minor copper and zinc mineralization (Born 1989).

South of the Grenville Front Tectonic Zone, anomalous samples are associated with felsic intrusives, migmatitic and metasedimentary rocks. The intrusion of felsic rocks into the sediments may have released hydrothermal fluids that would have leached the sediments of metals, subsequently depositing the sulphides. Throughout the entire study area, anomalies tend to occur on or near faults, which could have served as conduits for the flow of fluids. Additionally, any disseminated sulphides associated with the small pods of mafic intrusives that occur in the southern part of the study area may account for the anomalies located within that area.

GOLD

Gold grains recovered from modern alluvium samples are typically silt sized and may be classified according to their grain shape. The shape varies depending on the distance of transport from their source area. The 3 gold grain shapes include pristine, modified and reshaped. In general, pristine grains appear as angular wires or rods and thus retaine primary textures such as crystal faces; suggesting little distance of transport from the source. Modified grains retain the original shape but have irregular edges and crumpled or curled protrusions. Reshaped grains indicate a longer distance of transport from source therefore appearing flattened or rounded, retaining little or none of their original form. (DiLabio 1990).

Gold grain data for the 277 samples collected are listed in Appendix F of Reid (2002). A total of 265 gold grains were recovered, of which, 8 were pristine, 8 were modified and 249 were reshaped. The majority of grains were reshaped, suggesting some distance of transport. Table 9 lists the anomalous samples and the shapes of visible gold grains. Grains were recovered from only 66 of the sites sampled. In general, the majority of the gold grain counts represent background signatures, containing 1 to 11 grains. Only 7 samples were considered anomalous, 2 above the 98th percentile (21-32 grains) and 5 above the 95th percentile (13-20 grains) (Figure 49).

Sample Number	Number of Visible Gold Grains				Rock Type
	Total	Reshaped	Modified	Pristine	
98th percentile					
01-JR-MA-134	30	28	2	0	MIG
01-JR-MA-135	32	29	0	3	MIG
95th percentile					
01-JR-MA-9	14	13	0	1	GN/MS
01-JR-MA-29	20	20	0	0	MIG
01-JR-MA-74	14	13	1	0	GN/MS
01-JR-MA-98	17	17	0	0	MIG
01-JR-MA-136	15	14	0	1	MIG
90th percentile					
01-JR-MA-13	4	3	0	1	FI
01-JR-MA-41	4	4	0	0	MIG
01-JR-MA-73	4	4	0	0	GN/MS
01-JR-MA-99	9	9	0	0	MIG
01-JR-MA-100	5	4	1	0	GN/MS
01-JR-MA-124	11	9	1	1	MIG
01-JR-MA-128	5	5	0	0	GN/MS
01-JR-MA-129	4	4	0	0	MIG

Table 9: Summary of anomalous gold grain sites (Abbreviations of rock types: MIG-migmatitic; GN/MS-gneisses from metasedimentary origin; FI-felsic intrusives).

The anomalous gold grain samples all occur within the Grenville province. Copper, nickel and gold prospects are common in the Central Metasedimentary Belt, and limited gold production has occurred (Easton and Fyon 1991). These anomalies may be spatially associated with regional deformation zones or related to minor base metal mineralization that exists in association with quartzofeldspathic gneisses and amphibolites. However, the large number of reshaped grains suggests that the gold has travelled some distance from source. It is interesting to note that the most anomalous samples, 134 and 135 (Figure 49) are also anomalous in chromite KIM grains as well. The gold grains were recovered from coarse textured sediments (i.e., alluvial gravels). The coarse grained material was deposited in a high energy environment, therefore the fines (silt and clay) were flushed and not deposited, resulting in few silt sized gold

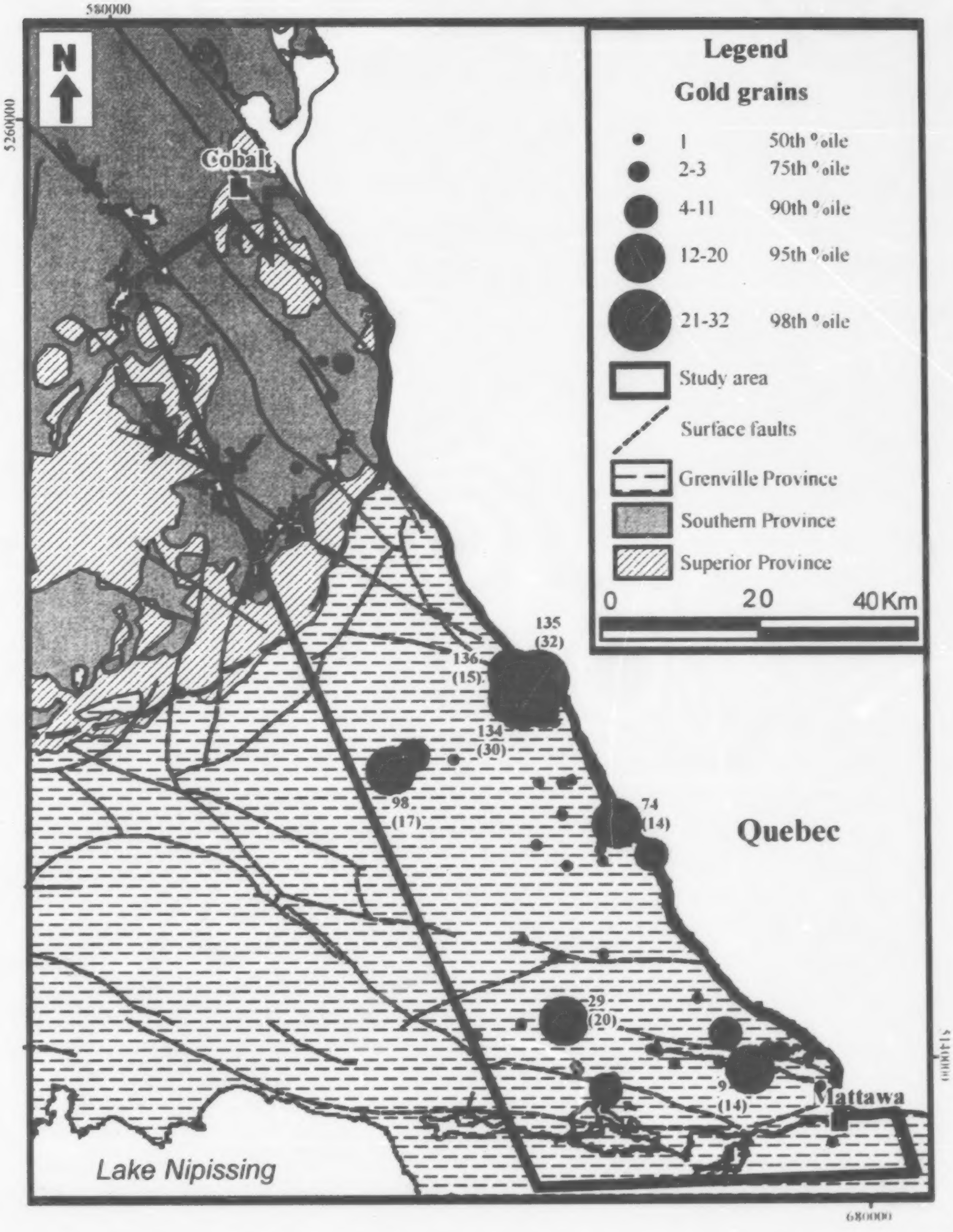

Figure 49: Regional distribution of gold grains. Anomalous sites are labeled with the corresponding number of grains shown in brackets.

grains. Alluvial gravels are too immature for the few available coarse grains to be concentrated into placers. The grains located within the Grenville province could also have been derived from Archean metavolcanic belts located in the Southern and Superior provinces to the north. More specifically, these gold grains could be derived from quartz-carbonate veins related to any of the following: the upper margin of the Nipissing diabase; the contact of the Nipissing Diabase and the lower part of the Coleman member; and areas where the Coleman member underlies the diabase and overlies Archean sulphide-bearing felsic or mafic metavolcanic rocks.

PEBBLE DATA

In general, the percentage of felsic intrusive, felsic igneous and sedimentary pebbles recovered from sample sites are highest, regardless of the bedrock terrane over which sediments were sampled. This reflects the relatively small area of mafic terrane as compared to the felsic to intermediate terrane within the study area. However, there is an association between bedrock lithologies or terranes and the percentage of corresponding pebbles. For example, the average percentage of felsic intrusive and felsic igneous pebbles collected from modern alluvium over felsic igneous terrane is 61% while the average percentage of mafic pebbles is 36% (Figure 50). Over Huronian Supergroup terrane, the average percentage of sedimentary pebbles is 45%, while the average percentage of mafic metavolcanic and mafic intrusive pebbles is 21% (Figure 51). A complete summary of pebble lithology counts for each sample site is included in Appendix J.

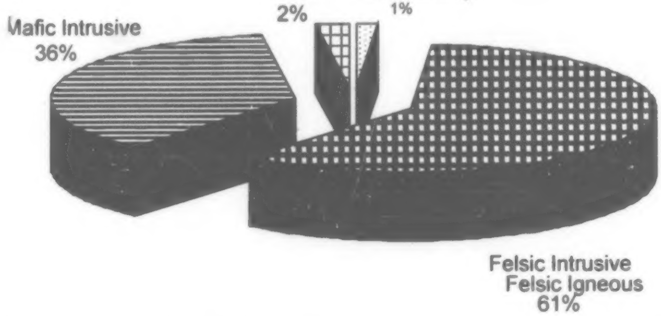

Figure 50: Average percentages of pebbles recovered from 20 sample sites collected over felsic igneous terrane.

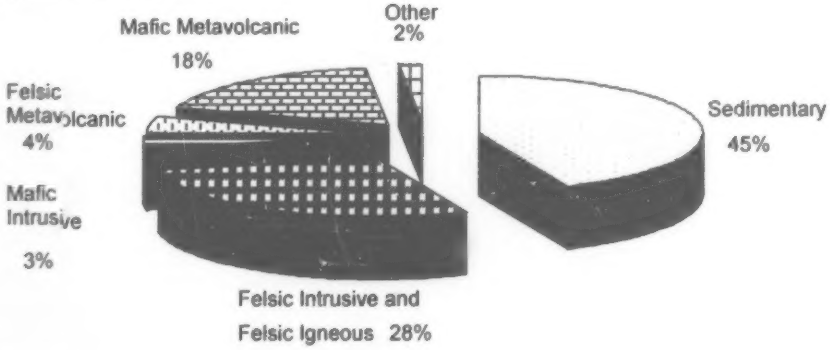

Figure 51: Average percentages of pebbles recovered from 38 sample sites collected over Huronian Supergroup terrane.

CONCLUSIONS

KIMBERLITES AND RELATED ROCKS

The primary objective of this survey was to create a regional dataset on the types and distribution of kimberlite indicator minerals by means of modern alluvium sampling. This objective was successfully fulfilled and the results indicate that the potential for finding kimberlite or related rocks in the region is high for the following reasons: the number of recovered KIMs; the presence of diamond potential indicators such as G10 garnets and diamond inclusion chromites which often occur with other KIMs; the deep seated structures present in the area combined with the Lake Temiskaming Structural Zone which is believed to be associated with kimberlites identified to the north of the study area. To locate the source(s) of the kimberlite heavy minerals, the sampling density needs to be increased and other exploration techniques, such as high density till sampling, employed. Therefore, more detailed exploration is strongly recommended.

BASE METAL AND GOLD

South Lorrain Township is one of the outlying camps of the Timiskaming silver belt. Historically, the main production has been native silver with minor amounts of cobalt, copper and nickel. The production of ore came from the Nipissing diabase. The anomalies outlined in this study are representative of areas of magmatic or volcanogenic massive sulphide deposits and may be associated with the Nipissing diabase. Further investigation is warranted.

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Overburden Drilling Management performed the heavy mineral processing under contract to the OGS and the Geoscience Laboratories in Sudbury performed the microprobe analysis.

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Appendix A

Sample Site Locations

SAMPLE NUMBER	UTM	
	EASTING	NORTHING
01-JR-MA-001	643908	5126198
01-JR-MA-002	651290	5127319
01-JR-MA-003	660432	5124167
01-JR-MA-004	665861	5125138
01-JR-MA-005	675952	5128518
01-JR-MA-006	673951	5135026
01-JR-MA-007	671096	5139380
01-JR-MA-008	668588	5137299
01-JR-MA-009	663819	5137964
01-JR-MA-010	667476	5140089
01-JR-MA-011	657048	5146725
01-JR-MA-012	650906	5140370
01-JR-MA-013	645400	5135162
01-JR-MA-014	634547	5143473
01-JR-MA-015	637014	5143925
01-JR-MA-016	635941	5140098
01-JR-MA-017	640659	5140221
01-JR-MA-018	641837	5137465
01-JR-MA-019	639494	5136319
01-JR-MA-020	630785	5138397
01-JR-MA-021	633849	5145152
01-JR-MA-023	629820	5140889
01-JR-MA-025	624876	5151712
01-JR-MA-027	637566	5146324
01-JR-MA-028	639912	5144721
01-JR-MA-029	640217	5144185
01-JR-MA-030	671063	5138964
01-JR-MA-031	671195	5135348
01-JR-MA-032	657840	5137962
01-JR-MA-033	662901	5137153
01-JR-MA-034	653970	5152279
01-JR-MA-035	640864	5156908
01-JR-MA-036	650802	5150283
01-JR-MA-037	650181	5148842
01-JR-MA-038	672548	5135496
01-JR-MA-039	659588	5138604
01-JR-MA-040	651841	5139820
01-JR-MA-041	660543	5142205
01-JR-MA-042	656711	5148364
01-JR-MA-043	650930	5152912
01-JR-MA-044	649580	5152713
01-JR-MA-045	645719	5153353
01-JR-MA-046	643184	5155205
01-JR-MA-047	643008	5149041
01-JR-MA-048	643271	5145681
01-JR-MA-049	644934	5145019
01-JR-MA-050	640496	5160068
01-JR-MA-051	639812	5152244
01-JR-MA-052	632974	5160990
01-JR-MA-053	626689	5159815
01-JR-MA-054	628935	5161388
01-JR-MA-055	633140	5161536
01-JR-MA-056	637147	5162667
01-JR-MA-057	637637	5163026
01-JR-MA-058	636689	5166432
01-JR-MA-059	638228	5164682
01-JR-MA-060	642009	5166617
01-JR-MA-061	643193	5166581
01-JR-MA-062	651458	5164166
01-JR-MA-063	644937	5165525
01-JR-MA-064	644760	5165985
01-JR-MA-065	642722	5155401
01-JR-MA-066	638691	5151963
01-JR-MA-067	637582	5152383
01-JR-MA-068	636900	5152659
01-JR-MA-069	635441	5152594
01-JR-MA-070	634804	5154349
01-JR-MA-071	644976	5166631
01-JR-MA-072	645901	5167644
01-JR-MA-073	646784	5170350
01-JR-MA-074	647008	5169534
01-JR-MA-075	647596	5168202
01-JR-MA-076	645155	5152486
01-JR-MA-077	654106	5138359
01-JR-MA-078	646116	5136656
01-JR-MA-079	641611	5138283
01-JR-MA-080	638727	5137374
01-JR-MA-081	635882	5136576
01-JR-MA-082	635523	5141345
01-JR-MA-083	634705	5142726
01-JR-MA-084	638702	5138936
01-JR-MA-085	647559	5124385
01-JR-MA-086	647142	5127461
01-JR-MA-087	650170	5126626
01-JR-MA-088	664219	5125241
01-JR-MA-089	670513	5124927
01-JR-MA-090	673510	5126084
01-JR-MA-091	673953	5128375
01-JR-MA-092	675709	5129264
01-JR-MA-093	678355	5128503
01-JR-MA-094	677974	5125748
01-JR-MA-095	680480	5126775
01-JR-MA-096	637053	5174443
01-JR-MA-097	634856	5175730
01-JR-MA-098	618612	5176202
01-JR-MA-099	621103	5178022
01-JR-MA-100	633345	5189106
01-JR-MA-101	640130	5174659
01-JR-MA-102	641136	5174970
01-JR-MA-103	666031	5139892

SAMPLE NUMBER	UTM	
	EASTING	NORTHING
01-JR-MA-104	668942	5142250
01-JR-MA-105	659160	5139516
01-JR-MA-106	653348	5135613
01-JR-MA-107	663448	5139355
01-JR-MA-108	662193	5140721
01-JR-MA-109	657838	5143920
01-JR-MA-110	656519	5150737
01-JR-MA-111	655767	5152231
01-JR-MA-112	631590	5149228
01-JR-MA-113	629920	5142073
01-JR-MA-114	628884	5142051
01-JR-MA-115	665567	5144910
01-JR-MA-116	659065	5150361
01-JR-MA-117	656592	5153429
01-JR-MA-118	656187	5153726
01-JR-MA-119	656115	5133218
01-JR-MA-120	655546	5132267
01-JR-MA-121	657897	5139510
01-JR-MA-122	655919	5140212
01-JR-MA-123	634902	5185887
01-JR-MA-124	637499	5183631
01-JR-MA-125	639211	5182357
01-JR-MA-126	640633	5163678
01-JR-MA-127	640769	5153800
01-JR-MA-128	647157	5169046
01-JR-MA-129	651356	5165311
01-JR-MA-130	652472	5160289
01-JR-MA-131	652873	5158625
01-JR-MA-132	641505	5182732
01-JR-MA-133	640308	5185101
01-JR-MA-134	636929	5187510
01-JR-MA-135	635810	5187676
01-JR-MA-136	633930	5188985
01-JR-MA-137	590655	5238961
01-JR-MA-138	596023	5223751
01-JR-MA-139	598827	5224861
01-JR-MA-140	601969	5225202
01-JR-MA-141	603346	5226723
01-JR-MA-142	602972	5229638
01-JR-MA-143	597981	5235609
01-JR-MA-144	595322	5237442
01-JR-MA-145	589214	5237696
01-JR-MA-146	596398	5225042
01-JR-MA-147	602380	5223278
01-JR-MA-148	602863	5223239
01-JR-MA-149	605726	5199810
01-JR-MA-150	607701	5200123
01-JR-MA-151	610195	5204209
01-JR-MA-152	610910	5204691
01-JR-MA-153	608704	5204989
01-JR-MA-154	612737	5207526
01-JR-MA-155	613532	5207601
01-JR-MA-156	615958	5205893
01-JR-MA-157	617140	5205029
01-JR-MA-158	619101	5204267
01-JR-MA-159	621636	5205101
01-JR-MA-160	621688	5201718
01-JR-MA-161	619783	5204163
01-JR-MA-162	599221	5245457
01-JR-MA-163	599046	5244540
01-JR-MA-164	599060	5244321
01-JR-MA-165	599380	5237996
01-JR-MA-166	601242	5237073
01-JR-MA-167	605802	5232162
01-JR-MA-168	606087	5231694
01-JR-MA-169	607750	5230300
01-JR-MA-170	609768	5228748
01-JR-MA-171	610509	5227838
01-JR-MA-172	612410	5228502
01-JR-MA-173	614370	5220047
01-JR-MA-174	614094	5229611
01-JR-MA-175	613257	5230775
01-JR-MA-176	615763	5230081
01-JR-MA-177	615454	5235096
01-JR-MA-178	616792	5234270
01-JR-MA-179	611080	5240920
01-JR-MA-180	610376	5242223
01-JR-MA-181	607315	5248281
01-JR-MA-182	609462	5201143
01-JR-MA-183	610973	5201641
01-JR-MA-184	607820	5210871
01-JR-MA-185	608725	5211440
01-JR-MA-186	608814	5207172
01-JR-MA-187	606308	5205638
01-JR-MA-188	604692	5210101
01-JR-MA-189	604471	5208550
01-JR-MA-190	603492	5207533
01-JR-MA-191	600188	5214466
01-JR-MA-192	602227	5219309
01-JR-MA-193	598410	5217114
01-JR-MA-194	599116	5214659
01-JR-MA-195	616775	5218072
01-JR-MA-196	617886	5215993
01-JR-MA-197	619252	5213433
01-JR-MA-198	619969	5212756
01-JR-MA-199	620890	5211695
01-JR-MA-200	623925	5208019
01-JR-MA-201	631674	5193498
01-JR-MA-202	629707	5196049
01-JR-MA-203	628572	5197840

SAMPLE NUMBER	UTM	
	EASTING	NORTHING
01-JR-MA-204	627653	5198977
01-JR-MA-205	626763	5200866
01-JR-MA-206	626185	5202130
01-JR-MA-207	625450	5204475
01-JR-MA-208	606291	5241931
01-JR-MA-209	597985	5241471
01-JR-MA-210	599113	5237240
01-JR-MA-211	605270	5235822
01-JR-MA-212	613748	5223883
01-JR-MA-213	613402	5224386
01-JR-MA-214	610923	5224296
01-JR-MA-215	612547	5186807
01-JR-MA-216	613360	5188100
01-JR-MA-217	609673	5191102
01-JR-MA-218	613578	5194975
01-JR-MA-219	614667	5195189
01-JR-MA-220	615850	5193860
01-JR-MA-221	609990	5194787
01-JR-MA-222	614105	5201346
01-JR-MA-223	615290	5200709
01-JR-MA-224	620094	5199691
01-JR-MA-225	624007	5197146
01-JR-MA-226	624327	5196157
01-JR-MA-227	625498	5195656
01-JR-MA-228	629957	5191144
01-JR-MA-229	626572	5189273
01-JR-MA-230	619295	5178623
01-JR-MA-231	615543	5184659
01-JR-MA-232	616018	5185618
01-JR-MA-233	617289	5189130
01-JR-MA-234	620489	5189614
01-JR-MA-235	616699	5192842
01-JR-MA-236	619421	5174667
01-JR-MA-237	619963	5166611
01-JR-MA-238	624667	5167591
01-JR-MA-239	625511	5160914
01-JR-MA-240	629028	5154291
01-JR-MA-241	649855	5155749
01-JR-MA-242	634201	5172336
01-JR-MA-243	627396	5170469
01-JR-MA-244	628756	5173434
01-JR-MA-245	598210	5229140
01-JR-MA-246	612225	5218703
01-JR-MA-247	610296	5216795
01-JR-MA-248	609468	5216886
01-JR-MA-249	613123	5220058
01-JR-MA-250	612387	5213502
01-JR-MA-251	609214	5227087
01-JR-MA-252	607088	5229465
01-JR-MA-253	605988	5230851
01-JR-MA-254	605074	5221538
01-JR-MA-255	604855	5218365
01-JR-MA-256	606602	5214985
01-JR-MA-257	605107	5212754
01-JR-SG-001	595328	5237534
01-JR-SG-002	599380	5216182
01-JR-SG-003	641427	5166550
01-JR-SG-004	640094	5170347
01-JR-SG-005	638707	5173706
01-JR-SG-006	635076	5174627
01-JR-SG-007	631020	5178660
01-JR-SG-008	632641	5184922
01-JR-SG-009	634724	5186008
01-JR-SG-010	633315	5187876
01-JR-SG-011	626225	5177648
01-JR-SG-012	624577	5185915
01-JR-SG-013	639706	5162332
01-JR-SG-014	641437	5150202
01-JR-TM-001	645160	5164450
01-JR-TM-002	590833	5178456
01-JR-TM-003	591266	5181936
01-JR-TM-004	591677	5186056
01-JR-TM-005	594868	5194493
01-JR-TM-006	595204	5197645
01-JR-TM-007	593687	5200208
01-JR-TM-008	589689	5206805
01-JR-BD-001	599907	5216729

Appendix C

Summary of Kimberlite Indicator Mineral Counts

Summary List of Abbreviations:

KIM:	Kimberlite Indicator Minerals
Diop.:	Diopside
GP:	Pyrope Garnet
GO:	Eclogitic Garnet
DC:	Chrome Diopside
IM:	Ilmenite
CR:	Chromite
FO:	Forsteritic Olivine
(p)	amount of grains picked from sample
(e)	amount of grains estimated to be in sample (zero means all picked)

SAMPLE NUMBER	Selected Pseudo KIMS				KIM Count																						
	1.0-2.0 mm	0.5-1.0 mm	0.25-0.5 mm		1.0 to 2.0 mm						0.5 to 1.0 mm							0.25 to 0.5 mm								
	Low-Cr Diop.	Low-Cr. Diop.	Low Cr Diop. (p)	Low Cr Diop. (e)	GP	GO	DC	IM	CR	FO	GP	GO	DC	IM (p)	IM (e)	CR	FO	GP	GO	DC	IM (p)	IM (e)	CR (p)	CR (e)	FO (p)	FO (e)
01-JR-MA-001	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-002	0	1	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-003	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-004	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
01-JR-MA-005	0	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-006	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-007	0	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-008	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-009	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-010	0	1	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	0	0
01-JR-MA-011	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
01-JR-MA-012	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
01-JR-MA-013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-014	1	2	28	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	0	1	1	0	4	0	0	0
01-JR-MA-015	0	0	11	0	0	0	0	0	0	0	0	0	0	3	0	0	0	1	1	1	0	0	2	6	0	0
01-JR-MA-016	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-017	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-018	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
01-JR-MA-019	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-020	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-021	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
01-JR-MA-023	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0
01-JR-MA-025	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
01-JR-MA-027	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-028	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
01-JR-MA-029	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	8	15	0	0
01-JR-MA-030	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
01-JR-MA-031	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-032	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
01-JR-MA-033	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	13	25	0	0
01-JR-MA-034	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-035	0	0	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-036	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0

SAMPLE NUMBER	Selected Pseudo KIMS				KIM Count																					
	1.0-2.0 mm	0.5-1.0 mm	0.25- 0.5 mm		1.0 to 2.0 mm						0.5 to 1.0 mm							0.25 to 0.5 mm								
	Low-Cr Diop.	Low-Cr Diop.	Low Cr Diop. (p)	Low Cr Diop. (e)	GP	GO	DC	IM	CR	FO	GP	GO	DC	IM (p)	IM (e)	CR	FO	GP	GO	DC	IM (p)	IM (e)	CR (p)	CR (e)	FO (p)	FO (e)
01-JR-MA-037	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-038	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-039	No Sample	0	3	0	No Sample						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-040	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0
01-JR-MA-041	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-042	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-043	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-044	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-045	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-046	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-047	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-048	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
01-JR-MA-049	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-050	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-051	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-052	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
01-JR-MA-053	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
01-JR-MA-054	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-055	0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	2	0	0	0
01-JR-MA-056	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
01-JR-MA-057	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-058	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	1	0	4	10	0	0
01-JR-MA-059	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0
01-JR-MA-060	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-061	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0
01-JR-MA-063	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
01-JR-MA-064	0	2	15	25	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
01-JR-MA-065	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-066	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-067	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
01-JR-MA-068	0	3	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
01-JR-MA-069	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0

SAMPLE NUMBER	Selected Pseudo KIMS				KIM Count																					
	1.0-2.0 mm	0.5-1.0 mm	0.25- 0.5 mm		1.0 to 2.0 mm						0.5 to 1.0 mm							0.25 to 0.5 mm								
	Low-Cr Diop.	Low-Cr Diop.	Low Cr Diop. (p)	Low Cr Diop. (e)	GP	GO	DC	IM	CR	FO	GP	GO	DC	IM (p)	IM (e)	CR	FO	GP	GO	DC	IM (p)	IM (e)	CR (p)	CR (e)	FO (p)	FO (e)
01-JR-MA-070	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-071	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-072	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-073	0	0	2	0	0	0	0	0	0	0	0	0	0	3	0	4	0	2	1	1	3	0	40	70	0	0
01-JR-MA-074	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	2	1	7	15	15	30	0	0
01-JR-MA-075	0	0	9	0	0	0	0	0	0	0	2	0	0	4	0	1	0	5	0	1	3	10	8	20	0	0
01-JR-MA-076	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
01-JR-MA-077	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-078	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-079	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-080	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-081	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-082	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
01-JR-MA-083	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
01-JR-MA-084	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-085	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-086	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-087	0	2	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-088	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
01-JR-MA-089	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-090	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-091	No Sample	0	1	0	No Sample						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-092	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-093	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-094	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-095	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-096	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
01-JR-MA-097	0	0	1	0	0	0	0	0	0	0	2	0	1	2	0	0	0	5	0	1	10	25	31	100	0	0
01-JR-MA-098	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	14	0	1	0
01-JR-MA-099	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0
01-JR-MA-100	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	3	0	0	0
01-JR-MA-101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
01-JR-MA-102	0	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	4	0	0	1	0	4	0	0	0

SAMPLE NUMBER	Selected Pseudo KIMS				KIM Count																						
	1.0-2.0 mm	0.5-1.0 mm	0.25- 0.5 mm		1.0 to 2.0 mm						0.5 to 1.0 mm							0.25 to 0.5 mm								
	Low-Cr Diop.	Low-Cr Diop.	Low Cr Diop. (p)	Low Cr Diop. (e)	GP	GO	DC	IM	CR	FO	GP	GO	DC	IM (p)	IM (e)	CR	FO	GP	GO	DC	IM (p)	IM (e)	CR (p)	CR (e)	FO (p)	FO (e)
01-JR-MA-103	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-104	0	1	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-105	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-106	0	0	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-107	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-108	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-109	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-110	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-111	0	1	5	0	0	0	0	0	0	0	1	0	0	1	0	3	0	1	0	1	1	0	1	0	0	0
01-JR-MA-112	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
01-JR-MA-113	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-114	0	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-115	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-116	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-117	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-118	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-119	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-120	0	1	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-121	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-122	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-123	0	0	9	0	0	0	0	0	0	0	2	0	0	1	0	7	0	17	3	0	10	30	27	50	0	0
01-JR-MA-124	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
01-JR-MA-125	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-126	0	0	5	0	0	0	0	0	0	0	1	0	0	0	0	3	0	4	0	1	1	0	24	60	0	0
01-JR-MA-127	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-128	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
01-JR-MA-129	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	2	0	0	0	0	0	0
01-JR-MA-130	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	2	0	0	0	0	0
01-JR-MA-131	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
01-JR-MA-132	0	1	1	0	0	0	0	0	0	0	1	0	0	4	0	0	0	4	0	0	6	0	22	0	0	0
01-JR-MA-133	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-134	0	0	1	0	0	0	0	0	0	0	1	0	0	2	0	2	0	6	0	0	3	10	37	150	0	0
01-JR-MA-135	0	0	22	0	0	0	0	0	0	0	2	0	0	2	0	0	0	25	2	1	6	10	40	100	0	0

SAMPLE NUMBER	Selected Pseudo KIMS				KIM Count																						
	1.0-2.0 mm	0.5-1.0 mm	0.25- 0.5 mm		1.0 to 2.0 mm						0.5 to 1.0 mm							0.25 to 0.5 mm								
	Low-Cr Diop.	Low-Cr Diop.	Low Cr Diop. (p)	Low Cr Diop. (e)	GP	GO	DC	IM	CR	FO	GP	GO	DC	IM (p)	IM (e)	CR	FO	GP	GO	DC	IM (p)	IM (e)	CR (p)	CR (e)	FO (p)	FO (e)
01-JR-MA-136	0	0	3	0	0	0	0	0	0	0	0	0	0	2	0	1	0	5	1	0	0	0	0	0	0	0
01-JR-MA-137	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
01-JR-MA-138	0	0	0	0	0	0	0	0	0	0	1	0	0	5	0	0	0	3	0	0	1	0	2	0	0	0
01-JR-MA-139	0	0	2	0	0	0	0	0	0	0	3	0	0	1	0	0	0	7	2	1	15	0	6	0	0	0
01-JR-MA-140	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	0	1	0	0	0	0	0
01-JR-MA-141	0	0	5	0	0	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0
01-JR-MA-142	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	0	1	0	0	6	0	0	0
01-JR-MA-143	0	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	7	2	0	7	0	0	0	0	0
01-JR-MA-144	0	0	7	0	0	0	0	0	0	0	1	0	0	2	0	0	0	13	3	0	8	0	0	0	1	0
01-JR-MA-145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	0	0
01-JR-MA-146	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3	0	0	0	0	0
01-JR-MA-147	0	2	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	0	0	0
01-JR-MA-148	0	0	1	0	0	0	0	0	0	0	1	0	0	1	0	3	0	0	0	1	0	0	0	0	0	0
01-JR-MA-149	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	2	1	0	2	0	0	0
01-JR-MA-150	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0
01-JR-MA-151	0	0	4	0	0	0	0	0	0	0	2	0	0	0	0	1	0	4	0	0	8	0	4	0	0	0
01-JR-MA-152	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	3	0	1	0	0	0	0	0	0
01-JR-MA-153	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
01-JR-MA-154	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0
01-JR-MA-155	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
01-JR-MA-156	0	0	3	0	0	0	0	0	0	0	0	2	0	1	0	0	0	8	1	0	7	0	1	0	0	0
01-JR-MA-157	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
01-JR-MA-158	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
01-JR-MA-159	No Sample	0	0	0	No Sample						0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
01-JR-MA-160	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-161	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-162	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	2	0	4	0	1	0	2	0
01-JR-MA-163	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-164	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
01-JR-MA-165	0	0	18	0	0	0	0	0	0	0	3	2	1	38	0	6	0	29	7	5	40	150	45	100	1	0
01-JR-MA-166	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	1	0	0	0
01-JR-MA-167	0	0	4	0	0	0	0	0	0	0	1	0	0	1	0	0	2	11	0	1	3	0	8	0	0	0
01-JR-MA-168	0	1	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0

SAMPLE NUMBER	Selected Pseudo KIMS				KIM Count																					
	1.0-2.0 mm	0.5-1.0 mm	0.25- 0.5 mm		1.0 to 2.0 mm						0.5 to 1.0 mm							0.25 to 0.5 mm								
	Low-Cr Diop.	Low-Cr Diop.	Low Cr Diop. (p)	Low Cr Diop. (e)	GP	GO	DC	IM	CR	FO	GP	GO	DC	IM (p)	IM (o)	CR	FO	GP	GO	DC	IM (p)	IM (o)	CR (p)	CR (o)	FO (p)	FO (o)
01-JR-MA-169	0	0	0	0	0	0	0	2	0	0	0	0	0	5	0	0	0	2	0	0	4	0	4	0	0	0
01-JR-MA-170	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	4	0	1	0	0	0
01-JR-MA-171	0	0	2	0	0	0	0	0	0	0	1	0	0	2	0	0	0	1	0	0	2	0	0	0	0	0
01-JR-MA-172	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0	1	14	0	0	14	0	3	0	0	0
01-JR-MA-173	0	0	1	0	1	0	0	0	0	0	0	0	0	2	0	0	0	6	0	2	6	0	13	0	2	0
01-JR-MA-174	0	0	6	0	0	0	0	0	0	0	1	0	0	2	0	0	0	7	0	0	6	0	6	0	0	0
01-JR-MA-175	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	1	1	0	0	0	0	0
01-JR-MA-176	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0
01-JR-MA-177	No Sample	0	1	0	No Sample						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-178	No Sample	0	2	0	No Sample						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-179	0	0	5	0	0	0	0	0	0	0	0	0	0	1	0	0	2	4	0	0	2	0	1	0	1	0
01-JR-MA-180	0	2	18	0	1	0	0	0	0	0	1	0	2	1	0	0	0	26	1	2	7	0	9	0	0	0
01-JR-MA-181	0	0	7	0	0	0	0	0	0	0	4	0	0	1	0	0	0	17	0	1	6	0	3	0	0	0
01-JR-MA-182	0	0	0	0	0	0	0	0	0	0	2	0	0	4	0	1	0	23	0	1	19	0	5	0	0	0
01-JR-MA-183	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	6	2	0	4	0	10	0	0	0
01-JR-MA-184	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-185	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
01-JR-MA-186	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
01-JR-MA-187	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	3	0	1	4	0	3	0	0	0
01-JR-MA-188	0	0	4	0	0	0	0	0	0	0	2	0	0	0	0	0	0	10	1	0	0	0	4	0	1	0
01-JR-MA-189	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0
01-JR-MA-190	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
01-JR-MA-191	0	0	1	0	0	0	0	0	0	0	2	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0
01-JR-MA-192	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	2	0	4	0	0	0
01-JR-MA-193	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	2	0	0	0	0	0
01-JR-MA-194	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0
01-JR-MA-195	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	2	0	1	0	0	0	1	0
01-JR-MA-196	0	0	0	0	0	0	0	0	0	0	3	0	0	1	0	0	0	3	0	0	0	0	3	0	0	0
01-JR-MA-197	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	14	0	0	0	0	0	0	50	500	0	0
01-JR-MA-198	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-199	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-200	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
01-JR-MA-201	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1	0

SAMPLE NUMBER	Selected Pseudo KIMS				KIM Count																					
	1.0-2.0 mm	0.5-1.0 mm	0.25- 0.5 mm		1.0 to 2.0 mm						0.5 to 1.0 mm							0.25 to 0.5 mm								
	Low-Cr Diop.	Low-Cr Diop.	Low Cr Diop. (p)	Low Cr Diop. (e)	GP	GO	DC	IM	CR	FO	GP	GO	DC	IM (p)	IM (e)	CR	FO	GP	GO	DC	IM (p)	IM (e)	CR (p)	CR (e)	FO (p)	FO (e)
01-JR-MA-202	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-203	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-204	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-205	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-206	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
01-JR-MA-207	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-208	No Sample	0	0	0	No Sample						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-209	No Sample	0	0	0	No Sample						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-210	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	2	0	4	0	1	0	0	0
01-JR-MA-211	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0
01-JR-MA-212	0	0	0	0	0	0	0	0	0	0	1	1	0	13	0	0	0	6	3	0	14	0	7	0	0	0
01-JR-MA-213	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	0	1	2	0	0	4	0	0	0	0	0
01-JR-MA-214	0	0	8	0	0	0	0	0	0	0	4	2	0	37	0	6	0	34	4	0	75	150	80	200	2	0
01-JR-MA-215	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
01-JR-MA-216	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-217	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	2	1	0	0	0	0	0	0
01-JR-MA-218	0	0	9	0	0	0	0	0	0	0	2	0	0	1	0	0	0	11	2	0	7	0	4	0	0	0
01-JR-MA-219	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	1	0	0	0
01-JR-MA-220	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-221	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	3	0	0	0
01-JR-MA-222	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-223	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0
01-JR-MA-224	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-225	0	1	0	0	0	0	0	0	0	0	0	0	1	141	500	0	0	0	0	0	50	15000	1	0	0	0
01-JR-MA-226	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	4	0	0	0
01-JR-MA-227	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
01-JR-MA-228	0	0	0	0	0	0	0	1	0	0	0	0	0	70	150	0	0	0	0	0	50	4500	0	0	0	0
01-JR-MA-229	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-230	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0
01-JR-MA-231	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0
01-JR-MA-232	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-233	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0
01-JR-MA-234	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0

SAMPLE NUMBER	Selected Pseudo KIMS				KIM Count																						
	1.0-2.0 mm	0.5-1.0 mm	0.25- 0.5 mm		1.0 to 2.0 mm						0.5 to 1.0 mm							0.25 to 0.5 mm									
	Low-Cr Disp.	Low-Cr Disp.	Low Cr Disp. (p)	Low Cr Disp. (e)	GP	GO	DC	IM	CR	FO	GP	GO	DC	IM (p)	IM (e)	CR	FO	GP	GO	DC	IM (p)	IM (e)	CR (p)	CR (e)	FO (p)	FO (e)
01-JR-MA-235	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-236	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
01-JR-MA-237	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	9	0	0	0
01-JR-MA-238	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	4	0	16	0	0	0
01-JR-MA-239	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-240	No Sample	0	0	0	No Sample						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-241	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-242	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
01-JR-MA-243	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	0
01-JR-MA-244	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-245	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	2	0	0	0	0	0
01-JR-MA-246	0	0	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0	0	0	2	0	12	0	0	0
01-JR-MA-247	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0
01-JR-MA-248	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-249	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	2	0	0	0
01-JR-MA-250	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	5	0	2	0	0	2	0	25	40	0	0
01-JR-MA-251	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
01-JR-MA-252	No Sample	0	0	0	No Sample						0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
01-JR-MA-253	0	0	6	0	0	0	0	0	0	1	1	0	0	13	0	1	1	10	3	1	15	60	30	60	0	0
01-JR-MA-254	0	0	9	0	0	0	0	0	0	0	2	0	0	0	0	0	0	3	2	0	0	0	14	0	0	0
01-JR-MA-255	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	2	0	1	0	0	0
01-JR-MA-256	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0	0	1	4	0	0	0	0	0	0	0	0
01-JR-MA-257	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0
01-JR-SG-001	0	0	10	0	2	0	0	4	0	0	14	3	1	41	0	1	2	72	34	4	57	150	7	15	2	10
01-JR-SG-002	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0
01-JR-SG-003	No Sample	0	0	0	No Sample						0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
01-JR-SG-004	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
01-JR-SG-005	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0
01-JR-SG-006	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-SG-007	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	1	0	0	0	25	40	0	0
01-JR-SG-008	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	4	0	1	0
01-JR-SG-009	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0
01-JR-SG-010	0	0	11	0	0	0	0	0	0	0	0	0	0	0	0	1	0	5	0	1	3	0	2	0	0	0

SAMPLE NUMBER	Selected [illegible] KIMS				KIM Counts																					
	1.0-2.0 mm	0.5-1.0 mm	0.25-0.5 mm		1.0 to 2.0 mm						0.5 to 1.0 mm							0.25 to 0.5 mm								
	Low-Cr Diop.	Low-Cr Diop.	Low Cr Diop. (p)	Low Cr Diop. (e)	GP	GO	DC	IM	CR	FO	GP	GO	DC	IM (p)	IM (e)	CR	FO	GP	GO	DC	IM (p)	IM (e)	CR (p)	CR (e)	FO (p)	FO (e)
01-JR-SG-011	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	1	0	2	0	0	0
01-JR-SG-012	0	0	4	0	0	0	0	0	0	0	1	0	0	0	0	0	0	4	0	0	0	0	9	0	0	0
01-JR-SG-013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-SG-014	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-TM-001	0	2	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01-JR-TM-002	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	1	0	1	0	0	0
01-JR-TM-003	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0
01-JR-TM-004	0	0	3	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	1	0	4	0	6	0	0	0
01-JR-TM-005	0	1	3	0	0	0	0	0	0	0	2	1	0	3	0	0	2	10	7	0	31	0	3	0	1	0
01-JR-TM-006	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	4	0	0	0
01-JR-TM-007	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3	0	0	0
01-JR-TM-008	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	2	0	2	0	0	0
01-JR-BD-001	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	0	4	0	1	0

Appendix E

Summary of Microprobe Data For Indicator Minerals

Summary List of Abbreviations:

Na: Sodium
Mg: Magnesium
Al: Aluminum
Si: Silicon
Cr: Chromium
Mn: Manganese
Ti: Titanium
Fe: Iron
Ni: Nickel
Nb: Niobium
V: Vanadium
Zn: Zinc
O: Oxygen
Ca: Calcium
K: Potassium

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
GARNETS											
G10											
01-JR-MA-075-008	42.018	0.035	20.693	4.562	21.613	4.113	0.389	6.495	0.013	0.000	99.931
01-JR-MA-123-007	42.348	0.029	19.972	4.616	21.054	4.291	0.493	7.073	0.022	0.000	99.898
01-JR-MA-131-001	41.539	0.009	20.534	4.039	21.321	3.516	0.445	7.673	0.003	0.003	99.082
01-JR-MA-165-036	41.902	0.019	20.037	4.972	20.803	4.545	0.521	7.431	0.012	0.000	100.242
01-JR-MA-169-002	42.224	0.034	20.608	4.241	20.951	3.777	0.484	7.458	0.013	0.007	99.797
01-JR-MA-180-006	42.662	0.032	21.473	3.308	24.798	1.122	0.293	5.735	0.015	0.000	99.438
01-JR-MA-181-005	42.062	0.117	20.715	3.838	20.977	4.016	0.483	7.933	0.026	0.000	100.167
01-JR-MA-182-009	41.413	0.109	20.340	4.452	21.219	3.913	0.424	7.258	0.021	0.001	99.150
01-JR-MA-188-004	42.051	0.000	20.682	4.166	21.748	3.808	0.430	6.626	0.000	0.000	99.511
01-JR-MA-212-10	42.094	0.011	20.575	4.633	23.671	1.539	0.408	6.755	0.010	0.000	99.696
01-JR-MA-245-004	41.789	0.010	20.789	4.187	21.657	3.680	0.470	7.336	0.016	0.004	99.938
01-JR-MA-253-004	41.008	0.364	16.328	9.590	20.369	5.765	0.351	6.026	0.037	0.003	99.841
01-JR-MA-253-006	41.805	0.033	20.390	4.698	21.170	4.428	0.458	6.970	0.022	0.005	99.979
01-JR-MA-257-004	41.407	0.534	17.857	6.845	21.496	5.066	0.309	6.281	0.069	0.002	99.866
01-JR-TM-005-006	41.812	0.056	19.969	5.188	21.101	4.210	0.531	7.509	0.011	0.003	100.390
G9											
01-JR-BD-001-001	41.373	0.775	17.927	6.098	19.791	5.941	0.312	7.333	0.092	0.000	99.642
01-JR-BD-001-002	41.218	0.186	19.551	4.984	19.795	5.341	0.449	7.986	0.026	0.000	99.536
01-JR-MA-011-001	41.158	0.006	19.736	5.059	19.344	6.310	0.498	7.409	0.000	0.005	99.525
01-JR-MA-012-001	41.187	0.602	20.080	3.287	19.263	5.202	0.410	9.538	0.051	0.000	99.620
01-JR-MA-015-001	41.960	0.052	20.957	3.247	20.609	5.452	0.324	7.032	0.008	0.003	99.644
01-JR-MA-021-001	42.038	0.023	20.671	4.100	20.244	5.605	0.480	6.969	0.002	0.007	100.139
01-JR-MA-028-001	41.304	0.125	17.685	7.435	19.581	5.816	0.422	6.923	0.017	0.000	99.306
01-JR-MA-030-001	40.740	0.236	18.188	6.405	19.314	5.858	0.407	7.675	0.048	0.000	98.871
01-JR-MA-033-001	41.639	0.649	19.602	3.859	20.865	5.469	0.274	7.126	0.038	0.000	99.521
01-JR-MA-035-001	41.616	0.018	20.546	4.299	20.241	5.115	0.508	7.686	0.016	0.000	100.045
01-JR-MA-048-001	41.256	0.128	19.234	5.198	20.016	5.744	0.376	7.283	0.021	0.000	99.256
01-JR-MA-055-001	42.051	0.126	20.645	4.203	20.702	5.417	0.411	6.713	0.016	0.000	100.284
01-JR-MA-058-001	41.563	0.063	19.116	5.432	20.020	5.455	0.461	7.215	0.019	0.000	99.344
01-JR-MA-058-002	41.106	0.015	18.951	5.481	18.388	6.371	0.563	8.482	0.000	0.005	99.362
01-JR-MA-058-003	41.785	0.042	20.412	4.266	20.703	5.015	0.502	7.077	0.006	0.002	99.810
01-JR-MA-059-001	41.521	0.200	17.950	6.851	19.686	5.780	0.382	7.143	0.028	0.000	99.541
01-JR-MA-062-001	42.421	0.130	20.826	2.948	20.436	4.803	0.382	7.788	0.019	0.000	99.753
01-JR-MA-062-002	42.348	0.001	20.947	3.632	20.922	4.673	0.410	7.318	0.005	0.000	100.256
01-JR-MA-067-001	41.870	0.197	20.364	3.503	20.663	4.837	0.394	8.058	0.041	0.000	99.927
01-JR-MA-068-001	42.084	0.049	20.227	4.291	21.387	5.822	0.234	5.870	0.002	0.000	99.966
01-JR-MA-073-001	41.089	0.188	18.442	6.456	19.817	5.609	0.435	7.453	0.034	0.002	99.527
01-JR-MA-073-002	41.102	0.201	20.958	3.175	20.368	4.757	0.391	8.294	0.027	0.000	99.273
01-JR-MA-073-003	41.069	0.957	19.913	2.603	18.448	6.437	0.381	9.979	0.064	0.002	99.853
01-JR-MA-074-001	41.453	0.303	19.043	4.977	20.767	5.391	0.324	6.993	0.030	0.002	99.283
01-JR-MA-074-002	41.639	0.067	19.557	5.143	20.477	5.842	0.311	6.784	0.010	0.005	99.835
01-JR-MA-074-003	41.974	0.106	20.956	3.394	20.873	4.898	0.369	7.408	0.023	0.002	100.003
01-JR-MA-074-004	41.531	0.000	20.927	3.766	19.560	5.300	0.580	8.455	0.008	0.003	100.130
01-JR-MA-074-005	41.288	0.027	19.719	5.221	19.361	6.140	0.556	7.714	0.021	0.000	100.047
01-JR-MA-074-006	41.427	0.748	16.448	6.006	20.203	5.922	0.313	6.715	0.048	0.000	99.830
01-JR-MA-075-001	41.279	0.028	19.892	5.303	19.301	5.902	0.487	7.940	0.015	0.009	100.156

Sample	SiO_2	TiO_2	Al_2O_3	Cr_2O_3	MgO	CaO	MnO	FeO	Na_2O	K_2O	Total
01-JR-MA-075-002	41.839	0.192	19.957	4.926	20.448	5.185	0.418	6.864	0.031	0.004	99.864
01-JR-MA-075-003	41.369	0.116	18.513	6.275	19.015	6.414	0.417	7.508	0.007	0.000	99.634
01-JR-MA-075-004	41.361	0.065	19.383	5.477	19.415	5.758	0.523	7.788	0.012	0.001	99.783
01-JR-MA-075-005	41.477	0.097	19.929	4.644	19.111	5.413	0.575	8.544	0.024	0.000	99.814
01-JR-MA-075-007	41.554	0.000	21.044	3.360	19.302	5.753	0.575	8.513	0.002	0.000	100.103
01-JR-MA-083-001	41.831	0.063	20.722	3.645	19.262	5.145	0.495	8.984	0.016	0.000	100.163
01-JR-MA-083-002	41.626	0.019	21.621	2.499	19.024	5.559	0.678	8.985	0.003	0.000	100.014
01-JR-MA-096-001	41.408	0.129	18.932	5.994	20.061	5.577	0.426	7.286	0.019	0.001	99.833
01-JR-MA-096-002	41.887	0.154	20.923	3.324	20.433	4.651	0.391	7.957	0.027	0.004	99.751
01-JR-MA-096-003	41.781	0.047	20.770	4.028	20.259	5.172	0.457	7.485	0.013	0.001	100.013
01-JR-MA-097-001	41.888	0.138	21.066	3.156	20.949	4.784	0.385	7.345	0.018	0.000	99.729
01-JR-MA-097-002	41.770	0.013	19.863	4.837	19.835	5.458	0.462	7.657	0.012	0.004	99.911
01-JR-MA-097-003	40.909	0.388	16.524	8.464	19.541	6.592	0.315	6.451	0.017	0.000	99.201
01-JR-MA-097-004	41.720	0.042	19.121	5.479	19.238	6.125	0.384	7.702	0.009	0.000	99.820
01-JR-MA-097-005	41.261	0.311	17.858	7.253	19.324	6.030	0.434	7.310	0.038	0.000	99.819
01-JR-MA-097-006	41.098	0.150	18.601	6.740	19.381	5.927	0.440	7.368	0.016	0.003	99.724
01-JR-MA-097-007	41.948	0.113	20.144	4.717	20.492	5.020	0.475	7.388	0.011	0.000	100.308
01-JR-MA-098-001	41.063	0.106	17.047	8.147	18.789	6.936	0.409	7.133	0.023	0.000	99.653
01-JR-MA-098-002	41.240	0.096	18.723	6.150	18.260	6.299	0.621	8.484	0.013	0.006	99.892
01-JR-MA-099-001	41.464	0.058	19.645	5.016	19.730	5.655	0.511	7.571	0.008	0.000	99.658
01-JR-MA-099-002	41.513	0.354	19.071	5.383	19.935	5.540	0.375	7.683	0.059	0.005	99.918
01-JR-MA-099-003	41.987	0.549	19.513	4.284	20.179	5.251	0.341	7.680	0.057	0.005	99.846
01-JR-MA-099-004	41.476	0.604	17.643	6.666	19.758	6.069	0.399	7.337	0.068	0.004	100.024
01-JR-MA-100-001	41.683	0.268	19.899	4.490	20.641	5.245	0.361	7.045	0.050	0.000	99.682
01-JR-MA-100-002	41.897	0.210	21.388	2.465	20.384	4.979	0.371	8.124	0.018	0.000	99.836
01-JR-MA-101-001	41.886	0.637	19.143	4.525	20.734	5.646	0.304	6.877	0.029	0.000	99.781
01-JR-MA-102-001	41.019	0.082	15.747	10.014	18.969	7.235	0.306	6.204	0.000	0.000	99.576
01-JR-MA-102-002	41.215	0.070	17.244	7.802	19.976	6.612	0.314	6.763	0.000	0.000	99.996
01-JR-MA-102-003	41.665	0.101	19.417	5.524	19.491	5.700	0.475	7.719	0.035	0.000	100.127
01-JR-MA-102-004	41.487	0.309	19.832	4.565	20.105	5.217	0.428	7.535	0.041	0.001	99.520
01-JR-MA-102-005	41.422	0.348	20.808	3.650	20.634	4.982	0.425	7.623	0.035	0.000	99.927
01-JR-MA-111-001	41.978	0.171	21.317	2.926	20.642	4.705	0.382	8.028	0.036	0.000	100.185
01-JR-MA-111-002	41.922	0.290	19.570	5.146	20.212	5.416	0.376	7.601	0.032	0.007	100.572
01-JR-MA-123-001	41.674	0.082	21.621	2.475	19.459	4.840	0.442	9.126	0.015	0.001	99.735
01-JR-MA-123-002	41.659	0.000	20.187	4.513	20.242	5.164	0.449	7.391	0.006	0.000	99.611
01-JR-MA-123-003	41.477	0.075	20.028	5.086	19.913	5.380	0.478	7.871	0.030	0.000	100.336
01-JR-MA-123-004	40.741	0.627	17.975	6.817	20.375	6.165	0.324	6.242	0.041	0.000	99.307
01-JR-MA-123-005	42.062	0.128	19.411	5.466	20.271	5.579	0.398	7.041	0.027	0.006	100.389
01-JR-MA-123-006	41.678	0.162	20.378	4.336	20.424	5.114	0.392	7.539	0.035	0.000	100.058
01-JR-MA-123-008	42.056	0.014	20.725	3.612	20.697	4.857	0.494	7.159	0.024	0.005	99.643
01-JR-MA-123-010	42.115	0.200	20.655	3.468	20.417	5.031	0.393	7.929	0.036	0.000	100.244
01-JR-MA-123-011	41.723	0.027	20.277	4.666	20.313	4.935	0.522	7.501	0.013	0.003	99.980
01-JR-MA-123-012	41.670	0.204	20.579	3.855	20.349	5.083	0.439	7.559	0.036	0.000	99.774
01-JR-MA-123-013	41.184	0.752	18.061	5.999	19.780	5.375	0.319	8.314	0.034	0.000	99.818
01-JR-MA-123-014	41.857	1.095	19.222	3.125	20.828	5.300	0.266	7.686	0.054	0.000	99.433
01-JR-MA-123-015	41.762	0.031	20.875	3.662	20.503	4.730	0.417	7.684	0.002	0.001	99.667
01-JR-MA-123-016	41.896	0.028	20.520	3.640	19.554	5.511	0.496	8.099	0.022	0.000	99.766
01-JR-MA-123-017	42.177	0.522	20.630	2.227	20.206	4.784	0.311	8.902	0.026	0.003	99.788
01-JR-MA-123-020	41.724	0.937	20.330	2.022	20.234	5.159	0.290	9.102	0.064	0.000	99.862

Sample	SiO_2	TiO_2	Al_2O_3	Cr_2O_3	MgO	CaO	MnO	FeO	Na_2O	K_2O	Total
01-JR-MA-123-021	41.850	0.413	19.334	5.068	20.459	5.578	0.371	7.131	0.041	0.001	100.246
01-JR-MA-123-022	42.259	0.089	21.143	3.270	19.686	5.133	0.566	8.573	0.012	0.000	100.731
01-JR-MA-124-001	40.892	0.286	17.127	8.297	20.021	6.179	0.373	6.328	0.047	0.002	99.542
01-JR-MA-126-001	41.890	0.287	18.555	6.107	19.789	5.756	0.376	7.248	0.050	0.000	100.058
01-JR-MA-126-002	41.877	0.259	18.815	5.797	20.578	5.482	0.363	6.721	0.029	0.003	99.924
01-JR-MA-126-003	42.364	0.024	20.837	3.793	20.467	5.078	0.424	7.408	0.014	0.003	100.412
01-JR-MA-126-004	41.917	0.061	17.333	7.732	19.796	6.782	0.325	6.491	0.011	0.002	100.450
01-JR-MA-126-005	42.208	0.028	21.388	3.248	20.974	5.002	0.350	6.881	0.000	0.000	100.079
01-JR-MA-128-001	41.911	0.227	19.584	4.816	19.786	5.403	0.457	8.081	0.034	0.007	100.306
01-JR-MA-129-001	41.262	0.307	17.614	7.120	20.327	6.004	0.302	6.597	0.022	0.003	99.558
01-JR-MA-129-002	41.796	0.099	20.641	3.883	20.363	4.930	0.443	7.886	0.027	0.000	100.068
01-JR-MA-129-003	41.858	0.000	20.528	4.267	20.562	5.388	0.441	7.206	0.000	0.000	100.250
01-JR-MA-130-001	41.659	0.090	20.761	3.924	20.124	4.895	0.461	7.850	0.037	0.000	99.801
01-JR-MA-130-002	41.661	0.008	19.408	5.613	19.707	5.601	0.494	7.283	0.020	0.000	99.795
01-JR-MA-131-002	41.735	0.189	18.853	5.401	20.219	5.434	0.418	7.506	0.027	0.000	99.782
01-JR-MA-132-001	41.731	0.087	20.322	4.006	20.514	5.267	0.408	7.239	0.018	0.000	99.592
01-JR-MA-132-003	41.838	0.014	19.846	4.896	19.615	5.505	0.518	8.125	0.020	0.000	100.377
01-JR-MA-132-004	42.170	0.004	20.098	4.728	20.593	5.132	0.432	7.324	0.011	0.000	100.492
01-JR-MA-132-005	42.310	0.001	21.180	3.652	20.829	4.604	0.515	7.458	0.022	0.000	100.571
01-JR-MA-134-001	41.510	0.176	18.174	6.491	20.237	5.752	0.410	7.051	0.011	0.000	99.812
01-JR-MA-134-002	41.410	0.020	20.353	4.001	19.146	5.586	0.541	8.428	0.010	0.009	99.504
01-JR-MA-134-003	41.901	0.594	20.555	2.385	19.767	5.559	0.368	9.026	0.039	0.000	100.194
01-JR-MA-134-004	42.453	0.389	20.716	3.256	21.405	4.992	0.303	6.803	0.027	0.000	100.344
01-JR-MA-134-005	41.904	0.511	19.675	3.629	19.888	5.905	0.329	7.997	0.020	0.001	99.859
01-JR-MA-134-006	42.142	0.000	21.476	2.411	18.990	5.536	0.673	8.951	0.011	0.002	100.192
01-JR-MA-134-007	41.916	0.135	19.099	5.992	19.946	5.985	0.382	7.269	0.011	0.004	100.739
01-JR-MA-135-001	41.494	0.195	17.566	7.677	19.639	6.477	0.332	6.872	0.000	0.000	100.252
01-JR-MA-135-002	41.106	0.145	18.149	6.384	19.188	6.052	0.426	7.678	0.031	0.000	99.159
01-JR-MA-135-003	42.185	0.461	20.921	2.604	21.514	4.573	0.284	7.150	0.045	0.000	99.737
01-JR-MA-135-004	41.557	0.209	18.256	6.749	19.665	5.984	0.505	6.831	0.046	0.000	99.802
01-JR-MA-135-005	41.494	0.176	20.871	3.145	20.015	4.956	0.444	8.726	0.042	0.000	99.869
01-JR-MA-135-006	42.390	0.227	20.697	3.105	20.957	4.830	0.361	7.414	0.027	0.000	100.008
01-JR-MA-135-007	41.665	0.237	19.644	4.756	19.980	5.531	0.407	7.743	0.040	0.006	100.009
01-JR-MA-135-008	41.915	0.264	17.990	6.841	19.182	5.203	0.507	8.282	0.045	0.000	100.229
01-JR-MA-135-009	41.469	0.021	21.085	2.985	19.031	5.718	0.627	8.880	0.017	0.000	99.833
01-JR-MA-135-010	42.803	0.425	18.884	4.901	20.882	5.528	0.304	6.695	0.054	0.004	100.480
01-JR-MA-135-012	41.550	0.156	20.222	3.705	19.971	5.116	0.421	8.008	0.031	0.002	99.182
01-JR-MA-135-013	41.391	0.062	19.519	4.895	19.049	5.628	0.436	8.680	0.023	0.000	99.683
01-JR-MA-135-014	41.382	0.000	19.380	5.366	19.331	5.769	0.512	7.913	0.030	0.002	99.685
01-JR-MA-135-015	41.591	0.041	19.510	5.338	19.356	5.871	0.543	7.800	0.023	0.000	100.073
01-JR-MA-135-016	41.151	0.084	18.306	7.308	19.226	6.066	0.458	7.241	0.018	0.001	99.859
01-JR-MA-135-017	41.681	0.357	19.437	5.355	20.744	5.335	0.345	6.842	0.044	0.001	100.141
01-JR-MA-135-018	41.704	0.114	20.084	4.618	19.817	5.483	0.403	7.665	0.021	0.000	99.909
01-JR-MA-135-019	41.809	0.139	18.836	5.911	19.728	5.728	0.452	7.467	0.036	0.000	100.106
01-JR-MA-135-020	41.747	0.562	19.176	4.852	19.766	5.432	0.402	8.164	0.052	0.003	100.156
01-JR-MA-135-021	41.786	0.321	19.507	5.007	20.807	5.554	0.316	6.547	0.008	0.005	99.858
01-JR-MA-135-022	41.336	0.031	21.086	3.224	18.745	5.093	0.483	9.800	0.017	0.000	99.815
01-JR-MA-135-023	42.090	0.012	19.674	5.542	19.798	5.409	0.463	7.480	0.008	0.002	100.478
01-JR-MA-135-024	41.911	0.006	20.551	3.972	19.909	5.017	0.518	8.193	0.027	0.000	100.104

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-135-025	41.313	0.739	19.180	4.446	20.241	5.809	0.272	7.388	0.014	0.005	99.407
01-JR-MA-135-028	41.537	0.573	18.748	5.347	20.590	5.653	0.312	7.132	0.042	0.000	99.934
01-JR-MA-135-029	41.742	0.020	21.387	3.076	19.450	5.003	0.563	9.041	0.003	0.001	100.286
01-JR-MA-136-001	41.871	0.000	20.468	4.612	20.359	5.322	0.419	7.232	0.000	0.000	100.283
01-JR-MA-136-002	41.603	0.030	21.284	2.886	18.936	5.522	0.604	9.088	0.011	0.000	99.964
01-JR-MA-136-003	41.653	0.625	20.094	3.366	20.694	5.231	0.313	7.756	0.051	0.000	99.783
01-JR-MA-136-004	41.186	0.589	18.694	5.659	19.941	5.609	0.327	7.330	0.069	0.000	99.404
01-JR-MA-136-005	42.154	0.074	19.633	5.236	20.067	5.656	0.414	7.650	0.013	0.001	100.898
01-JR-MA-136-006	41.024	0.718	20.533	2.048	19.003	5.380	0.424	10.247	0.050	0.006	99.433
01-JR-MA-137-001	41.536	0.600	20.133	3.680	20.948	5.274	0.314	7.092	0.060	0.000	99.637
01-JR-MA-138-001	41.896	0.004	20.812	4.256	20.367	4.716	0.521	7.714	0.019	0.000	100.305
01-JR-MA-138-002	42.137	0.127	20.766	3.620	19.827	4.842	0.452	8.400	0.046	0.000	100.217
01-JR-MA-138-003	41.963	0.686	20.811	2.446	20.328	5.141	0.334	8.132	0.056	0.000	99.897
01-JR-MA-138-005	41.603	0.003	20.490	4.143	19.872	5.297	0.467	7.749	0.001	0.000	99.625
01-JR-MA-139-001	42.627	0.258	21.259	2.844	21.434	4.515	0.307	6.962	0.030	0.005	100.241
01-JR-MA-139-0010	42.588	0.335	21.826	2.043	21.815	4.324	0.328	7.034	0.036	0.000	100.329
01-JR-MA-139-0011	42.172	0.506	20.463	3.898	21.307	5.049	0.305	6.905	0.051	0.000	100.656
01-JR-MA-139-0012	41.890	0.305	19.666	4.893	21.489	5.045	0.298	6.187	0.033	0.002	99.808
01-JR-MA-139-002	42.031	0.502	20.405	3.354	21.470	4.994	0.295	6.792	0.039	0.001	99.883
01-JR-MA-139-003	40.950	1.374	16.680	6.467	19.169	6.774	0.310	7.822	0.054	0.001	99.601
01-JR-MA-139-004	42.039	0.741	19.872	3.086	20.553	5.166	0.319	8.098	0.050	0.002	99.926
01-JR-MA-139-005	41.619	0.238	17.516	7.128	20.175	5.888	0.327	6.669	0.031	0.000	99.591
01-JR-MA-139-006	42.070	0.040	18.946	5.522	20.410	5.635	0.328	6.814	0.007	0.000	99.772
01-JR-MA-139-007	41.883	0.265	21.192	2.164	20.444	4.644	0.372	8.201	0.041	0.002	99.208
01-JR-MA-140-001	40.928	0.139	18.600	6.196	18.518	6.080	0.530	8.536	0.013	0.006	99.546
01-JR-MA-140-003	41.543	0.035	20.635	3.447	19.134	5.548	0.606	8.766	0.003	0.001	99.718
01-JR-MA-141-003	41.518	0.173	20.653	4.172	19.832	5.167	0.474	8.044	0.050	0.000	100.083
01-JR-MA-141-004	41.695	0.028	21.202	3.717	20.918	4.903	0.416	7.379	0.007	0.000	100.265
01-JR-MA-142-001	41.957	0.273	19.648	4.486	20.510	5.203	0.365	7.479	0.036	0.000	99.957
01-JR-MA-142-002	42.050	0.002	21.394	3.114	20.949	4.386	0.544	7.562	0.010	0.000	100.011
01-JR-MA-142-003	41.657	0.051	19.281	5.166	18.400	5.855	0.613	8.933	0.031	0.005	99.992
01-JR-MA-142-004	42.043	0.023	19.916	4.389	19.814	5.837	0.499	7.316	0.000	0.000	99.837
01-JR-MA-143-001	40.984	0.293	19.107	5.015	19.549	5.348	0.509	8.292	0.047	0.000	99.144
01-JR-MA-143-002	42.088	0.109	21.045	3.163	20.358	4.831	0.429	7.873	0.016	0.001	99.913
01-JR-MA-143-003	42.088	0.789	20.423	2.373	21.264	5.075	0.276	7.492	0.045	0.000	99.825
01-JR-MA-143-004	41.489	0.581	19.814	3.660	20.759	5.112	0.295	7.280	0.057	0.000	99.047
01-JR-MA-143-005	42.185	0.518	19.338	4.406	21.838	4.695	0.298	6.121	0.067	0.006	99.472
01-JR-MA-143-006	41.641	0.236	17.826	6.747	21.341	5.220	0.288	5.959	0.024	0.000	99.282
01-JR-MA-143-007	42.267	0.690	20.172	2.503	21.149	4.955	0.283	7.445	0.047	0.001	99.512
01-JR-MA-144-001	41.650	0.076	18.969	5.968	20.011	5.087	0.484	7.221	0.024	0.001	99.491
01-JR-MA-144-002	41.617	0.694	20.443	2.484	21.185	4.953	0.292	7.318	0.061	0.004	99.051
01-JR-MA-144-003	41.661	0.711	17.779	6.425	20.699	5.716	0.304	6.276	0.048	0.000	99.519
01-JR-MA-144-005	41.557	0.278	18.685	5.965	20.468	5.688	0.305	7.097	0.035	0.000	100.078
01-JR-MA-144-006	41.457	0.060	20.883	2.573	18.439	5.472	0.507	10.040	0.025	0.002	99.458
01-JR-MA-144-007	42.024	0.298	21.051	2.607	20.659	4.665	0.385	8.425	0.059	0.000	100.173
01-JR-MA-144-008	41.395	0.849	17.984	6.111	20.508	5.799	0.325	6.727	0.050	0.001	99.749
01-JR-MA-144-009	41.881	0.751	20.743	2.244	20.958	4.990	0.276	7.793	0.042	0.000	99.678
01-JR-MA-144-010	41.621	0.947	19.349	3.474	21.188	5.450	0.256	7.049	0.043	0.000	99.377
01-JR-MA-144-011	42.106	0.599	19.482	4.137	20.840	5.339	0.309	7.175	0.035	0.006	100.028

Sample	SiO_2	TiO_2	Al_2O_3	Cr_2O_3	MgO	CaO	MnO	FeO	Na_2O	K_2O	Total
01-JR-MA-144-012	41.333	0.037	20.328	4.129	19.861	5.277	0.435	7.942	0.022	0.002	99.366
01-JR-MA-144-013	42.055	0.324	20.257	3.793	21.244	5.097	0.300	6.856	0.025	0.000	99.951
01-JR-MA-144-017	40.718	1.622	19.062	3.030	19.207	6.455	0.349	8.649	0.106	0.002	99.200
01-JR-MA-145-001	41.574	0.086	19.341	5.547	20.123	5.005	0.453	7.516	0.029	0.000	99.674
01-JR-MA-146-001	42.568	0.227	20.432	3.076	21.078	5.014	0.299	7.145	0.032	0.009	99.880
01-JR-MA-146-002	41.915	0.388	19.924	4.072	20.988	5.210	0.292	6.933	0.024	0.003	99.749
01-JR-MA-146-003	42.363	0.106	20.456	3.563	21.227	4.953	0.300	7.001	0.027	0.004	100.000
01-JR-MA-147-001	41.855	0.018	20.559	4.132	20.710	4.621	0.487	7.494	0.014	0.000	99.890
01-JR-MA-147-002	41.685	0.042	20.892	2.987	18.808	5.265	0.566	9.923	0.005	0.002	100.175
01-JR-MA-147-003	41.875	0.197	20.711	3.174	20.387	4.843	0.436	7.905	0.033	0.006	99.567
01-JR-MA-147-004	41.617	0.000	20.990	3.686	20.779	4.777	0.495	7.332	0.015	0.004	99.695
01-JR-MA-147-005	41.196	0.032	20.430	3.950	19.984	5.262	0.459	7.662	0.006	0.004	98.985
01-JR-MA-148-001	41.548	0.075	20.136	4.918	20.463	4.764	0.526	7.518	0.013	0.001	99.962
01-JR-MA-149-001	41.642	0.027	20.013	4.649	20.257	5.271	0.489	7.073	0.020	0.000	99.441
01-JR-MA-150-001	42.417	0.183	21.638	2.175	20.836	4.578	0.346	7.976	0.023	0.001	100.173
01-JR-MA-150-002	41.576	0.184	17.296	7.709	18.026	6.868	0.490	8.179	0.013	0.000	100.343
01-JR-MA-151-001	40.967	0.390	15.340	10.181	18.967	7.146	0.322	6.375	0.023	0.009	99.720
01-JR-MA-151-002	41.674	0.280	18.748	5.812	19.843	5.762	0.365	7.413	0.033	0.001	99.931
01-JR-MA-151-003	41.398	0.242	18.723	6.125	19.253	5.617	0.519	8.014	0.048	0.007	99.946
01-JR-MA-151-004	41.848	0.067	20.011	4.372	18.593	5.653	0.577	9.329	0.005	0.005	100.460
01-JR-MA-151-005	40.381	0.628	14.832	10.444	19.064	7.399	0.315	6.457	0.019	0.000	99.539
01-JR-MA-151-006	41.155	0.341	17.692	7.320	20.125	5.395	0.449	6.952	0.068	0.000	99.497
01-JR-MA-152-001	41.168	0.552	19.294	4.200	20.069	5.653	0.332	7.885	0.018	0.000	99.171
01-JR-MA-152-002	41.600	0.329	19.001	5.519	20.341	5.311	0.352	6.770	0.044	0.000	99.267
01-JR-MA-152-003	41.906	0.018	19.674	5.142	20.086	5.610	0.432	7.181	0.014	0.000	100.063
01-JR-MA-154-001	42.012	0.000	20.404	4.099	20.981	4.480	0.519	7.539	0.017	0.003	100.054
01-JR-MA-154-002	41.374	0.189	20.475	3.649	20.719	5.055	0.386	7.353	0.028	0.000	99.228
01-JR-MA-155-001	41.761	0.182	18.208	6.792	19.581	5.987	0.466	6.882	0.037	0.000	99.896
01-JR-MA-155-002	42.314	0.079	19.933	4.475	20.861	4.756	0.419	6.914	0.030	0.000	99.781
01-JR-MA-156-001	41.585	0.341	19.123	5.204	21.008	5.219	0.329	6.448	0.048	0.002	99.307
01-JR-MA-156-002	41.884	0.029	20.697	3.702	20.704	4.620	0.461	7.274	0.043	0.000	99.414
01-JR-MA-156-003	41.927	0.209	20.694	3.658	20.929	4.949	0.386	7.184	0.030	0.000	99.966
01-JR-MA-156-004	41.625	0.275	20.235	3.565	20.743	4.889	0.372	7.559	0.035	0.000	99.298
01-JR-MA-156-005	42.196	0.373	20.193	3.203	21.361	4.822	0.294	6.906	0.041	0.000	99.389
01-JR-MA-156-006	41.635	0.154	18.926	5.781	19.524	5.781	0.424	7.904	0.018	0.000	100.147
01-JR-MA-156-007	41.919	0.245	19.673	4.416	20.894	5.135	0.335	6.750	0.026	0.004	99.397
01-JR-MA-156-008	41.321	0.559	18.238	6.010	19.018	5.746	0.434	8.173	0.055	0.000	99.554
01-JR-MA-157-001	41.673	0.177	21.664	2.333	21.148	4.488	0.413	8.027	0.045	0.000	99.968
01-JR-MA-162-001	41.192	0.000	20.626	3.842	19.488	5.774	0.538	8.202	0.008	0.000	99.670
01-JR-MA-162-002	41.303	0.543	18.270	6.534	20.573	5.803	0.291	6.558	0.028	0.000	99.903
01-JR-MA-162-003	41.752	0.064	21.784	2.039	18.628	4.687	0.372	11.012	0.007	0.000	100.345
01-JR-MA-162-004	41.544	0.719	20.247	2.868	20.815	5.016	0.280	8.096	0.044	0.002	99.631
01-JR-MA-162-005	41.397	0.146	19.986	4.472	19.709	5.284	0.473	8.168	0.035	0.000	99.670
01-JR-MA-162-006	41.931	0.014	20.695	3.818	20.708	4.937	0.478	7.620	0.009	0.000	100.210
01-JR-MA-162-007	42.422	0.067	19.535	4.937	21.009	5.699	0.308	6.736	0.021	0.000	100.734
01-JR-MA-162-008	41.924	0.154	19.465	5.092	19.703	5.372	0.460	8.133	0.020	0.006	100.329
01-JR-MA-162-009	41.711	0.782	20.137	3.163	20.620	5.307	0.330	8.047	0.063	0.005	100.165
01-JR-MA-162-010	41.410	0.084	19.017	5.937	19.497	5.998	0.475	7.253	0.023	0.000	99.694
01-JR-MA-165-001	41.947	0.166	18.676	6.334	19.351	5.672	0.506	7.425	0.046	0.001	100.124

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-165-002	42.350	0.651	19.253	4.234	20.879	5.462	0.295	7.188	0.044	0.000	100.356
01-JR-MA-165-003	41.753	0.561	18.882	5.268	20.805	5.433	0.309	6.900	0.025	0.000	99.936
01-JR-MA-165-004	42.417	0.278	21.095	2.510	20.929	4.535	0.404	8.021	0.040	0.000	100.229
01-JR-MA-165-005	42.363	0.043	20.818	3.552	20.709	4.738	0.439	7.533	0.010	0.008	100.213
01-JR-MA-165-006	41.828	0.006	20.735	3.521	20.822	5.040	0.453	6.975	0.015	0.000	99.395
01-JR-MA-165-007	42.728	0.294	21.005	2.189	21.934	4.501	0.261	6.813	0.039	0.000	99.764
01-JR-MA-165-008	42.311	0.013	20.568	4.013	20.416	4.971	0.513	7.526	0.010	0.000	100.341
01-JR-MA-165-009	40.860	0.034	20.292	3.569	16.811	5.419	0.639	12.155	0.017	0.001	99.797
01-JR-MA-165-010	41.617	0.203	19.903	4.449	19.840	5.601	0.416	7.616	0.027	0.002	99.674
01-JR-MA-165-011	41.526	0.363	18.400	5.653	19.798	5.830	0.312	7.436	0.023	0.008	99.349
01-JR-MA-165-012	41.384	0.050	18.750	6.553	19.224	6.162	0.501	7.014	0.026	0.000	99.664
01-JR-MA-165-013	41.324	0.577	18.488	6.052	19.940	5.695	0.377	7.094	0.055	0.002	99.604
01-JR-MA-165-014	41.295	0.082	19.562	5.383	20.057	5.183	0.496	7.267	0.011	0.002	99.338
01-JR-MA-165-015	41.600	0.216	18.701	6.361	19.437	5.782	0.497	7.462	0.048	0.002	100.106
01-JR-MA-165-016	41.161	0.029	18.987	6.364	19.433	6.229	0.517	7.018	0.027	0.000	99.765
01-JR-MA-165-017	40.813	0.047	19.047	5.279	16.322	7.098	0.703	10.369	0.022	0.000	99.700
01-JR-MA-165-018	41.682	0.124	19.029	6.118	19.526	5.588	0.481	7.399	0.043	0.000	99.990
01-JR-MA-165-019	40.999	0.100	19.433	4.871	16.857	6.014	0.482	11.344	0.017	0.006	100.123
01-JR-MA-165-020	40.897	0.124	17.372	7.754	19.082	6.686	0.325	7.304	0.030	0.000	99.574
01-JR-MA-165-021	41.153	0.706	19.928	3.457	20.438	5.066	0.330	7.797	0.038	0.000	98.913
01-JR-MA-165-022	40.572	0.094	19.357	4.942	16.376	6.859	0.679	10.825	0.001	0.001	99.706
01-JR-MA-165-023	41.459	0.656	19.905	3.529	20.404	5.406	0.311	7.600	0.041	0.000	99.311
01-JR-MA-165-024	41.775	0.004	21.274	3.093	19.032	4.911	0.518	9.193	0.004	0.000	99.804
01-JR-MA-165-025	40.960	0.044	18.883	6.452	19.429	6.167	0.489	6.956	0.027	0.000	99.407
01-JR-MA-165-026	41.611	0.007	20.164	4.468	20.276	5.223	0.479	7.099	0.010	0.002	99.339
01-JR-MA-165-032	41.687	0.713	20.361	2.161	20.999	4.983	0.285	7.755	0.041	0.000	98.985
01-JR-MA-165-034	41.852	0.146	19.620	5.570	20.133	5.374	0.475	7.348	0.051	0.000	100.569
01-JR-MA-165-035	41.852	0.146	20.266	3.988	20.908	5.129	0.337	7.059	0.020	0.004	99.709
01-JR-MA-166-001	41.184	0.050	20.279	4.373	19.213	5.221	0.593	8.344	0.009	0.001	99.267
01-JR-MA-167-001	41.931	0.001	20.980	3.998	20.668	4.779	0.420	7.341	0.001	0.000	100.119
01-JR-MA-167-002	41.100	0.097	20.149	4.875	19.809	5.421	0.454	7.459	0.029	0.000	99.393
01-JR-MA-167-003	41.872	0.012	20.172	4.798	20.558	4.879	0.472	7.005	0.032	0.004	99.804
01-JR-MA-167-004	41.315	0.759	20.061	3.104	19.703	5.294	0.342	8.579	0.050	0.000	99.207
01-JR-MA-167-005	41.481	0.012	20.263	4.619	20.005	5.075	0.458	7.511	0.014	0.001	99.439
01-JR-MA-167-006	41.874	0.019	20.201	4.886	19.948	5.139	0.538	7.787	0.019	0.000	100.411
01-JR-MA-167-007	41.982	0.178	21.739	2.271	20.197	4.855	0.422	8.050	0.032	0.003	99.729
01-JR-MA-167-008	40.989	0.000	18.662	6.569	19.127	6.492	0.453	7.055	0.000	0.000	99.347
01-JR-MA-167-009	41.418	0.016	20.865	3.620	20.095	4.972	0.405	8.020	0.014	0.005	99.430
01-JR-MA-167-010	41.669	0.034	21.018	3.905	20.078	4.881	0.523	7.711	0.023	0.000	99.842
01-JR-MA-167-011	41.845	0.384	19.402	4.902	20.719	5.386	0.304	6.943	0.021	0.001	99.907
01-JR-MA-167-012	42.017	0.034	20.518	4.292	20.225	5.005	0.531	7.374	0.027	0.002	100.025
01-JR-MA-168-001	41.912	0.000	20.402	4.378	20.371	4.892	0.521	7.192	0.004	0.001	99.673
01-JR-MA-169-001	41.845	0.144	21.419	2.647	20.041	4.874	0.440	8.238	0.040	0.006	99.694
01-JR-MA-170-001	41.653	0.044	19.737	5.133	19.806	5.668	0.459	7.057	0.000	0.000	99.557
01-JR-MA-170-002	41.486	0.041	19.523	5.632	18.723	6.175	0.512	7.897	0.014	0.000	100.003
01-JR-MA-171-001	41.651	0.173	20.506	4.050	20.528	4.871	0.408	7.390	0.037	0.001	99.615
01-JR-MA-171-002	41.564	0.020	19.634	5.512	20.151	5.441	0.488	7.091	0.004	0.004	99.909
01-JR-MA-172-001	41.014	0.844	18.827	5.003	20.766	5.459	0.317	6.717	0.079	0.000	99.026
01-JR-MA-172-002	41.452	0.008	21.042	3.523	20.242	5.178	0.493	7.685	0.001	0.001	99.625

Sample	SiO_2	TiO_2	Al_2O_3	Cr_2O_3	MgO	CaO	MnO	FeO	Na_2O	K_2O	Total
01-JR-MA-172-003	41.309	0.064	19.002	6.364	19.314	5.910	0.468	7.482	0.032	0.001	99.946
01-JR-MA-172-004	41.875	0.157	21.425	2.771	20.861	4.774	0.354	7.440	0.031	0.000	99.688
01-JR-MA-172-005	41.235	0.086	18.339	6.872	20.475	5.365	0.382	6.674	0.025	0.000	99.453
01-JR-MA-172-006	42.043	0.111	20.569	3.836	20.262	5.223	0.379	7.756	0.026	0.000	100.205
01-JR-MA-172-007	41.756	0.098	19.995	5.049	20.571	5.340	0.425	6.984	0.021	0.001	100.240
01-JR-MA-172-008	41.242	0.036	17.756	7.597	20.061	6.304	0.310	6.312	0.004	0.004	99.626
01-JR-MA-172-009	41.013	0.356	18.213	6.541	19.795	5.883	0.384	7.245	0.044	0.000	99.474
01-JR-MA-172-010	41.971	0.104	20.276	4.154	19.832	5.529	0.422	7.869	0.007	0.000	100.164
01-JR-MA-172-011	41.151	0.372	17.808	6.845	20.281	5.633	0.359	6.169	0.047	0.000	98.665
01-JR-MA-172-012	40.615	0.344	16.410	9.009	19.406	6.589	0.389	6.855	0.032	0.000	99.649
01-JR-MA-172-013	41.330	0.306	19.495	4.467	20.721	5.296	0.330	7.034	0.025	0.001	99.005
01-JR-MA-172-014	40.246	0.029	14.170	11.823	17.382	8.748	0.352	6.587	0.000	0.000	99.337
01-JR-MA-173-001	41.094	0.431	19.375	4.457	18.800	5.994	0.386	8.989	0.032	0.005	99.563
01-JR-MA-173-002	41.889	0.250	20.598	3.388	20.993	4.747	0.377	6.985	0.042	0.000	99.269
01-JR-MA-173-003	41.456	0.365	19.795	4.810	21.103	5.238	0.331	6.639	0.036	0.002	99.775
01-JR-MA-173-004	41.251	0.010	19.516	5.774	19.577	5.733	0.476	7.486	0.003	0.000	99.826
01-JR-MA-173-005	41.436	0.015	20.983	3.613	19.575	5.445	0.570	7.820	0.009	0.000	99.466
01-JR-MA-173-006	41.252	0.574	20.783	2.060	19.323	5.456	0.373	9.347	0.036	0.002	99.206
01-JR-MA-174-001	40.812	0.241	18.021	6.978	19.037	6.428	0.407	7.491	0.021	0.004	99.440
01-JR-MA-174-002	40.803	0.649	16.552	8.352	19.400	6.387	0.386	6.854	0.062	0.000	99.445
01-JR-MA-174-003	41.513	0.058	19.179	6.044	19.873	5.987	0.427	6.842	0.006	0.000	99.929
01-JR-MA-174-004	42.033	0.012	21.428	3.506	20.574	4.964	0.459	7.005	0.009	0.000	99.990
01-JR-MA-174-005	41.362	0.489	19.509	4.477	19.978	5.620	0.383	7.768	0.045	0.000	99.631
01-JR-MA-174-006	41.729	0.017	20.635	4.240	20.385	5.221	0.475	7.270	0.007	0.000	99.979
01-JR-MA-174-007	41.692	0.021	21.629	3.003	21.498	4.223	0.434	7.366	0.013	0.006	99.885
01-JR-MA-174-008	41.036	0.164	19.447	4.960	19.604	5.056	0.505	7.943	0.032	0.000	98.747
01-JR-MA-175-001	41.249	0.655	18.277	6.099	19.799	6.026	0.387	7.465	0.064	0.000	100.021
01-JR-MA-175-002	40.878	0.252	19.362	5.243	19.113	5.570	0.456	8.206	0.032	0.000	99.112
01-JR-MA-175-003	41.285	0.284	20.062	4.182	20.240	5.156	0.407	7.692	0.043	0.003	99.354
01-JR-MA-176-001	41.259	0.301	17.796	7.570	20.196	5.874	0.348	6.172	0.032	0.002	99.550
01-JR-MA-176-002	41.560	0.428	20.860	2.288	20.104	5.019	0.368	8.957	0.038	0.000	99.622
01-JR-MA-176-003	42.170	0.154	20.621	3.311	21.297	4.894	0.292	6.852	0.033	0.000	99.624
01-JR-MA-179-001	41.673	0.036	20.696	4.005	21.031	4.360	0.456	7.360	0.013	0.004	99.634
01-JR-MA-179-002	41.319	0.213	20.718	3.185	20.711	4.885	0.344	7.466	0.018	0.002	98.861
01-JR-MA-179-003	41.576	0.019	20.820	3.616	19.237	5.326	0.632	8.543	0.016	0.000	99.785
01-JR-MA-179-004	41.121	0.025	21.044	3.484	19.673	5.696	0.494	7.687	0.000	0.004	99.228
01-JR-MA-180-001	41.570	0.062	21.024	3.805	20.281	4.771	0.523	7.532	0.015	0.000	99.583
01-JR-MA-180-002	42.034	0.497	19.301	4.480	21.145	5.578	0.295	6.728	0.029	0.000	100.087
01-JR-MA-180-003	41.609	0.584	19.913	4.118	20.635	5.096	0.330	7.219	0.060	0.001	99.565
01-JR-MA-180-004	41.632	0.000	20.274	4.545	20.005	6.002	0.497	6.675	0.013	0.000	99.643
01-JR-MA-180-005	40.979	0.203	18.835	6.506	19.532	5.889	0.454	7.218	0.029	0.001	99.646
01-JR-MA-180-007	41.186	0.039	20.649	3.995	20.610	4.425	0.473	7.583	0.035	0.001	98.996
01-JR-MA-180-008	41.275	0.012	20.800	3.463	19.913	5.032	0.508	8.150	0.000	0.001	99.154
01-JR-MA-180-009	41.413	0.019	20.106	4.643	19.881	5.663	0.457	7.630	0.000	0.001	99.813
01-JR-MA-180-010	41.221	0.010	19.451	5.545	19.699	5.585	0.472	7.455	0.022	0.001	99.461
01-JR-MA-180-011	41.367	0.067	19.905	4.682	19.533	5.646	0.490	8.061	0.014	0.000	99.765
01-JR-MA-180-012	41.649	0.150	20.446	3.718	20.850	4.892	0.391	7.174	0.027	0.000	99.297
01-JR-MA-180-013	41.926	0.226	20.300	3.681	20.459	5.110	0.401	7.875	0.037	0.000	100.015
01-JR-MA-180-015	41.273	0.007	20.742	3.928	19.696	5.372	0.476	8.135	0.021	0.000	99.650

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-180-016	41.592	0.254	18.879	6.089	19.652	5.911	0.457	7.315	0.039	0.001	100.189
01-JR-MA-180-017	41.706	0.079	20.159	4.584	20.220	5.167	0.500	7.559	0.022	0.000	99.996
01-JR-MA-180-018	41.495	0.123	19.463	5.075	20.233	5.276	0.409	7.624	0.033	0.002	99.733
01-JR-MA-180-019	41.252	0.182	18.684	6.133	19.366	5.957	0.457	7.628	0.021	0.000	99.680
01-JR-MA-180-020	40.653	0.087	17.741	7.758	19.237	6.123	0.480	7.202	0.018	0.000	99.299
01-JR-MA-180-021	41.222	0.788	19.246	3.843	20.237	5.231	0.314	8.549	0.071	0.000	99.501
01-JR-MA-180-022	41.851	0.060	19.944	4.756	20.534	4.668	0.499	7.293	0.017	0.005	99.627
01-JR-MA-180-023	41.552	0.004	19.153	5.947	20.409	5.126	0.468	6.906	0.008	0.000	99.573
01-JR-MA-180-024	41.380	0.019	19.954	4.518	19.901	5.103	0.523	7.811	0.010	0.000	99.219
01-JR-MA-180-025	40.930	0.004	19.883	4.870	19.213	5.817	0.603	7.932	0.007	0.002	99.261
01-JR-MA-180-026	41.787	0.079	20.315	4.230	19.734	5.416	0.499	7.726	0.016	0.000	99.802
01-JR-MA-180-027	42.023	0.278	19.621	4.738	21.038	5.290	0.307	6.774	0.025	0.000	100.094
01-JR-MA-180-029	41.559	0.604	20.029	3.369	20.906	5.164	0.303	7.199	0.050	0.000	99.183
01-JR-MA-181-001	41.476	0.352	18.826	5.550	19.807	5.487	0.391	7.976	0.038	0.000	99.903
01-JR-MA-181-002	40.845	0.124	17.759	7.310	17.960	6.677	0.474	8.501	0.013	0.001	99.664
01-JR-MA-181-003	41.806	0.073	20.805	3.744	20.239	5.061	0.533	7.774	0.015	0.000	100.050
01-JR-MA-181-004	41.308	0.000	20.382	4.177	20.364	4.971	0.470	7.593	0.009	0.002	99.276
01-JR-MA-181-006	40.862	0.074	17.971	7.262	18.466	6.683	0.511	7.519	0.010	0.000	99.358
01-JR-MA-181-007	41.199	0.091	19.814	4.436	19.078	5.800	0.367	8.487	0.024	0.000	99.296
01-JR-MA-181-008	42.207	0.093	20.962	3.105	21.768	4.885	0.301	6.400	0.026	0.010	99.757
01-JR-MA-181-009	41.385	0.916	18.755	4.826	20.693	5.478	0.305	7.021	0.094	0.000	99.473
01-JR-MA-181-010	42.200	0.441	19.512	4.377	21.023	5.178	0.314	6.572	0.057	0.000	99.674
01-JR-MA-181-011	40.648	0.010	18.332	6.627	18.859	6.629	0.495	7.371	0.016	0.002	98.989
01-JR-MA-181-012	40.973	0.033	19.562	4.723	18.479	5.924	0.611	8.964	0.000	0.007	99.276
01-JR-MA-181-013	41.608	0.011	19.620	5.432	20.176	4.837	0.514	7.697	0.024	0.000	99.919
01-JR-MA-181-014	41.423	0.200	19.558	4.821	20.466	5.117	0.386	7.206	0.036	0.001	99.214
01-JR-MA-181-015	41.869	0.002	20.503	4.103	20.711	4.348	0.528	7.587	0.016	0.000	99.667
01-JR-MA-181-016	41.716	0.064	20.132	4.728	20.097	4.881	0.505	7.686	0.033	0.000	99.842
01-JR-MA-181-017	42.301	0.002	20.657	3.672	20.425	4.466	0.562	7.866	0.017	0.001	99.969
01-JR-MA-181-018	41.551	0.307	19.263	4.781	20.146	5.489	0.406	7.642	0.032	0.000	99.617
01-JR-MA-181-019	42.172	0.045	21.846	2.509	21.027	4.662	0.414	7.893	0.001	0.001	100.570
01-JR-MA-181-020	41.294	0.127	20.281	4.570	20.400	5.253	0.431	7.327	0.024	0.000	99.707
01-JR-MA-181-022	41.880	0.000	20.317	4.635	20.449	5.093	0.434	6.953	0.024	0.001	99.786
01-JR-MA-182-002	41.924	0.168	20.235	4.274	20.627	5.189	0.366	7.212	0.015	0.000	100.010
01-JR-MA-182-003	42.184	0.403	20.181	3.900	19.884	5.013	0.383	8.264	0.053	0.005	100.270
01-JR-MA-182-004	41.879	0.193	19.217	5.336	20.877	5.327	0.286	6.746	0.017	0.002	99.880
01-JR-MA-182-005	41.634	0.679	17.297	7.095	20.153	6.135	0.343	6.752	0.053	0.001	100.142
01-JR-MA-182-006	41.957	0.234	20.026	4.336	20.193	5.357	0.439	7.594	0.037	0.001	100.174
01-JR-MA-182-008	41.916	0.194	18.793	5.450	20.225	5.804	0.327	7.063	0.026	0.000	99.798
01-JR-MA-182-010	40.811	0.103	18.163	6.973	19.372	6.300	0.378	7.225	0.000	0.000	99.325
01-JR-MA-182-011	42.124	0.195	19.684	4.783	20.877	5.420	0.411	6.288	0.042	0.000	99.824
01-JR-MA-182-012	41.118	0.285	18.553	5.854	19.929	5.912	0.413	7.556	0.016	0.000	99.636
01-JR-MA-182-013	40.933	0.552	18.290	6.231	19.197	6.129	0.395	7.841	0.053	0.002	99.623
01-JR-MA-182-014	41.647	0.201	20.175	4.105	20.469	5.096	0.418	7.763	0.031	0.001	99.906
01-JR-MA-182-015	41.072	0.143	20.902	3.277	20.094	5.118	0.402	8.073	0.015	0.000	99.096
01-JR-MA-182-016	40.966	0.077	18.343	7.030	19.531	5.902	0.419	7.161	0.034	0.000	99.463
01-JR-MA-182-017	41.868	0.066	19.241	5.980	19.545	5.590	0.459	7.377	0.018	0.000	100.144
01-JR-MA-182-018	41.650	0.443	19.474	4.533	21.162	5.182	0.297	6.579	0.039	0.000	99.359
01-JR-MA-182-019	41.318	0.231	19.361	5.336	19.687	5.553	0.420	7.585	0.030	0.010	99.531

Sample	SiO_2	TiO_2	Al_2O_3	Cr_2O_3	MgO	CaO	MnO	FeO	Na_2O	K_2O	Total
01-JR-MA-182-020	41.673	0.050	22.089	2.071	20.202	4.684	0.452	8.621	0.022	0.000	99.864
01-JR-MA-182-021	41.819	0.108	21.534	2.176	20.185	4.826	0.430	8.222	0.025	0.001	99.326
01-JR-MA-182-022	41.453	0.195	20.053	4.316	20.766	5.066	0.376	7.063	0.023	0.004	99.315
01-JR-MA-182-023	41.258	0.014	20.387	4.158	19.879	5.374	0.436	7.977	0.014	0.001	99.498
01-JR-MA-182-024	42.022	0.336	20.277	4.074	21.348	4.794	0.330	6.867	0.055	0.000	100.103
01-JR-MA-182-025	40.969	0.264	18.236	6.376	19.931	5.687	0.331	7.098	0.014	0.002	98.908
01-JR-MA-183-001	41.531	0.449	19.021	5.301	19.921	5.741	0.382	7.602	0.066	0.000	100.014
01-JR-MA-183-002	41.220	0.178	18.672	6.245	18.611	6.129	0.540	8.540	0.030	0.002	100.167
01-JR-MA-183-003	41.654	0.202	19.082	5.201	20.034	5.807	0.386	7.167	0.028	0.002	99.563
01-JR-MA-183-004	40.938	0.035	19.368	5.805	20.309	5.043	0.469	7.192	0.023	0.000	99.182
01-JR-MA-183-005	41.405	0.280	19.015	5.443	19.912	5.440	0.439	7.708	0.032	0.004	99.678
01-JR-MA-183-006	41.896	0.559	20.079	3.520	20.639	4.935	0.358	8.038	0.044	0.005	100.073
01-JR-MA-185-001	41.911	0.384	20.720	2.597	20.448	4.812	0.327	8.398	0.035	0.002	99.634
01-JR-MA-186-001	41.622	0.038	19.928	4.467	20.566	4.721	0.519	7.420	0.014	0.001	99.296
01-JR-MA-187-001	41.183	0.134	19.540	4.617	19.947	5.557	0.462	7.719	0.022	0.000	99.181
01-JR-MA-187-002	41.880	0.067	19.792	4.713	21.308	4.780	0.374	6.778	0.012	0.000	99.704
01-JR-MA-187-003	42.129	0.110	21.248	2.900	20.614	5.042	0.423	7.294	0.013	0.002	99.775
01-JR-MA-187-006	41.326	0.000	19.660	5.549	19.951	5.716	0.461	7.166	0.006	0.002	99.837
01-JR-MA-188-001	41.993	0.403	19.608	4.483	20.973	5.389	0.315	6.909	0.026	0.001	100.100
01-JR-MA-188-002	41.459	0.092	20.038	4.090	19.254	5.594	0.505	8.471	0.008	0.000	99.511
01-JR-MA-188-003	41.068	0.041	16.583	8.278	19.311	6.669	0.327	6.341	0.001	0.000	98.619
01-JR-MA-188-005	40.953	0.065	18.347	6.392	19.508	6.082	0.444	7.531	0.005	0.000	99.327
01-JR-MA-188-006	42.187	0.139	21.557	2.654	20.923	4.745	0.350	7.706	0.018	0.001	100.280
01-JR-MA-188-007	41.773	0.011	19.147	5.731	20.028	5.349	0.489	7.418	0.019	0.000	99.965
01-JR-MA-188-008	41.674	0.048	20.321	3.794	19.835	5.149	0.475	8.210	0.016	0.005	99.527
01-JR-MA-188-009	41.656	0.651	19.836	4.048	21.596	4.946	0.299	6.338	0.064	0.000	99.434
01-JR-MA-188-010	40.950	0.054	20.238	4.469	18.533	5.837	0.584	8.737	0.017	0.000	99.419
01-JR-MA-188-011	41.515	0.167	19.124	5.494	19.993	5.552	0.429	7.441	0.035	0.000	99.750
01-JR-MA-188-013	41.574	0.605	20.485	3.556	21.002	5.016	0.327	7.559	0.047	0.000	100.171
01-JR-MA-189-001	42.164	0.075	21.834	2.113	19.650	4.535	0.426	9.156	0.013	0.000	99.966
01-JR-MA-189-002	41.867	0.000	20.968	3.287	21.289	4.436	0.469	6.942	0.022	0.000	99.280
01-JR-MA-191-001	41.831	0.000	20.170	5.048	20.043	5.643	0.430	7.130	0.009	0.000	100.304
01-JR-MA-191-002	41.646	0.026	21.411	3.236	20.013	5.410	0.519	7.587	0.014	0.000	99.862
01-JR-MA-192-001	41.977	1.016	20.477	2.292	21.102	5.005	0.252	8.279	0.064	0.005	100.469
01-JR-MA-193-001	42.020	0.533	19.879	3.613	20.763	5.028	0.306	7.399	0.040	0.000	99.581
01-JR-MA-193-002	41.665	0.019	17.741	7.449	19.844	6.549	0.330	6.427	0.000	0.003	100.027
01-JR-MA-193-003	41.455	0.853	20.055	2.222	20.897	5.009	0.272	8.289	0.062	0.000	99.114
01-JR-MA-194-001	41.828	0.046	20.269	4.596	20.094	4.831	0.520	7.836	0.021	0.004	100.045
01-JR-MA-195-001	41.309	0.277	17.520	7.720	19.886	6.131	0.365	6.410	0.028	0.001	99.647
01-JR-MA-195-002	41.647	0.231	19.242	5.277	19.827	5.642	0.442	7.510	0.038	0.003	99.859
01-JR-MA-195-003	41.458	0.080	19.157	5.828	19.800	5.624	0.481	7.273	0.016	0.005	99.722
01-JR-MA-195-004	41.377	0.175	18.664	6.045	19.672	5.718	0.396	7.658	0.027	0.000	99.732
01-JR-MA-195-005	41.442	0.110	21.083	2.667	20.523	4.990	0.403	7.563	0.012	0.005	98.798
01-JR-MA-195-006	41.423	0.472	18.254	6.028	19.442	5.735	0.473	7.688	0.042	0.001	99.558
01-JR-MA-195-007	41.869	0.143	20.886	2.751	21.286	4.811	0.289	7.283	0.035	0.000	99.353
01-JR-MA-195-008	41.372	0.797	19.935	3.167	19.671	5.919	0.344	8.543	0.031	0.000	99.779
01-JR-MA-196-001	41.370	0.274	19.557	4.724	20.250	5.160	0.396	7.640	0.043	0.001	99.415
01-JR-MA-196-002	41.174	0.311	19.793	4.178	19.836	4.771	0.465	8.525	0.047	0.003	99.103
01-JR-MA-196-003	41.791	0.060	21.050	3.037	20.139	5.033	0.409	7.790	0.008	0.000	99.317

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-196-004	41.308	0.335	20.194	4.027	20.107	4.521	0.464	8.484	0.043	0.002	99.485
01-JR-MA-196-005	41.310	0.129	20.140	4.089	20.190	5.093	0.425	7.774	0.024	0.003	99.177
01-JR-MA-196-006	41.627	0.288	19.733	4.512	19.895	4.751	0.472	8.468	0.052	0.001	99.799
01-JR-MA-200-001	41.593	0.484	19.552	4.262	20.523	5.247	0.376	7.405	0.061	0.002	99.505
01-JR-MA-210-019	40.908	0.149	18.043	6.794	18.897	6.020	0.480	7.850	0.033	0.000	99.174
01-JR-MA-210-020	41.314	0.224	21.293	2.290	19.847	4.754	0.448	9.023	0.040	0.000	99.233
01-JR-MA-210-021	41.480	0.271	21.623	2.183	21.807	4.494	0.297	7.015	0.037	0.000	99.207
01-JR-MA-210-022	41.106	0.093	20.009	4.523	19.741	5.402	0.473	7.812	0.016	0.000	99.175
01-JR-MA-210-023	41.895	0.327	20.391	3.610	21.685	4.792	0.314	6.713	0.033	0.000	99.760
01-JR-MA-210-024	41.680	0.341	20.807	2.940	19.798	4.965	0.463	8.582	0.046	0.000	99.622
01-JR-MA-210-025	41.796	0.625	19.627	4.029	20.547	5.191	0.328	7.646	0.057	0.000	99.846
01-JR-MA-210-026	41.712	0.084	20.267	4.607	20.084	5.196	0.482	7.462	0.015	0.002	99.911
01-JR-MA-210-027	41.712	0.644	20.218	3.014	20.449	5.187	0.327	8.040	0.051	0.000	99.642
01-JR-MA-211-001	41.107	0.149	20.503	3.654	19.809	4.785	0.478	8.750	0.026	0.000	99.261
01-JR-MA-212-001	41.705	0.251	20.736	2.566	20.881	4.605	0.373	7.897	0.027	0.000	99.041
01-JR-MA-212-002	41.764	0.143	20.199	3.655	21.300	5.090	0.269	6.624	0.012	0.000	99.056
01-JR-MA-212-003	41.082	0.244	19.168	5.775	20.394	5.439	0.417	7.237	0.037	0.002	99.795
01-JR-MA-212-004	41.443	0.332	19.320	5.100	19.529	6.221	0.440	7.954	0.023	0.002	100.364
01-JR-MA-212-005	41.826	0.455	21.033	2.335	20.196	4.869	0.381	8.826	0.041	0.002	99.964
01-JR-MA-212-006	41.460	0.754	18.772	5.526	21.180	5.385	0.315	6.492	0.080	0.001	99.965
01-JR-MA-213-001	41.809	0.044	20.879	3.647	19.922	5.190	0.551	7.784	0.011	0.000	99.837
01-JR-MA-213-002	41.119	0.104	17.871	7.303	20.040	6.258	0.332	6.621	0.006	0.006	99.660
01-JR-MA-213-003	41.643	0.469	19.392	4.942	20.223	5.155	0.396	7.408	0.059	0.002	99.689
01-JR-MA-214-001	41.116	0.422	17.866	6.849	19.598	6.124	0.404	7.295	0.039	0.000	99.713
01-JR-MA-214-002	41.789	0.284	20.919	3.403	21.600	4.496	0.384	6.774	0.043	0.003	99.695
01-JR-MA-214-004	42.519	0.009	21.581	3.129	21.299	4.219	0.477	7.092	0.010	0.000	100.335
01-JR-MA-214-005	41.568	0.562	21.097	2.197	20.144	4.434	0.349	9.681	0.089	0.000	100.121
01-JR-MA-214-006	42.078	0.395	18.779	6.172	20.663	5.737	0.354	6.917	0.024	0.002	101.121
01-JR-MA-214-007	42.030	0.029	20.818	4.051	20.516	5.073	0.410	7.345	0.008	0.003	100.283
01-JR-MA-214-009	42.487	0.004	22.283	2.153	22.555	3.941	0.346	6.623	0.029	0.000	100.421
01-JR-MA-214-010	41.921	0.033	18.113	7.072	20.395	6.279	0.296	6.241	0.000	0.000	100.350
01-JR-MA-214-011	41.422	0.301	20.026	4.283	20.084	4.819	0.470	8.241	0.050	0.001	99.697
01-JR-MA-214-012	42.210	0.170	17.779	7.394	20.176	6.237	0.298	6.396	0.003	0.002	100.665
01-JR-MA-214-013	42.035	0.231	21.154	3.055	20.661	4.909	0.369	8.063	0.040	0.000	100.517
01-JR-MA-214-014	41.247	0.111	20.239	4.464	20.089	5.488	0.428	7.954	0.030	0.004	100.054
01-JR-MA-214-015	41.784	0.096	20.826	3.431	20.682	4.917	0.360	7.724	0.027	0.000	99.847
01-JR-MA-214-016	41.120	0.067	20.010	4.938	20.870	5.091	0.460	7.080	0.030	0.000	99.666
01-JR-MA-214-017	41.494	0.000	19.467	5.726	20.544	5.576	0.421	6.579	0.014	0.000	99.821
01-JR-MA-214-018	41.517	0.011	19.123	6.476	20.029	5.738	0.426	6.803	0.014	0.000	100.137
01-JR-MA-214-020	41.791	0.460	21.116	2.419	20.870	5.079	0.283	7.529	0.030	0.002	99.579
01-JR-MA-214-022	41.417	0.385	17.204	8.072	19.247	6.244	0.417	7.686	0.047	0.000	100.719
01-JR-MA-214-024	40.845	0.108	18.891	5.780	16.786	7.126	0.682	10.031	0.020	0.000	100.269
01-JR-MA-214-025	41.843	0.251	19.437	5.317	20.803	5.623	0.366	6.840	0.027	0.001	100.508
01-JR-MA-214-026	41.423	0.027	19.069	6.449	20.508	5.336	0.459	6.494	0.011	0.006	99.782
01-JR-MA-214-027	41.455	0.062	18.920	6.473	19.764	6.018	0.460	7.008	0.004	0.000	100.164
01-JR-MA-214-028	41.594	0.039	20.925	3.623	20.384	5.201	0.470	7.804	0.000	0.002	100.042
01-JR-MA-214-029	41.347	0.181	19.024	6.068	20.328	5.686	0.393	7.356	0.039	0.006	100.428
01-JR-MA-214-030	42.186	0.137	22.034	2.095	20.164	4.550	0.409	8.873	0.031	0.003	100.482
01-JR-MA-214-031	41.732	0.232	19.904	4.693	19.744	5.257	0.484	8.222	0.038	0.007	100.313

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-214-032	41.538	0.000	21.657	3.140	19.672	5.313	0.569	8.287	0.003	0.000	100.179
01-JR-MA-214-033	42.160	0.000	21.070	3.685	20.976	4.940	0.386	7.229	0.011	0.000	100.457
01-JR-MA-214-034	41.674	0.242	17.028	8.389	20.185	6.067	0.382	6.548	0.030	0.000	100.545
01-JR-MA-214-038	41.859	0.272	18.952	5.800	20.848	5.531	0.309	6.178	0.023	0.000	99.772
01-JR-MA-214-039	40.917	0.001	20.159	4.805	20.171	5.503	0.462	7.322	0.010	0.001	99.351
01-JR-MA-214-040	40.840	0.123	17.230	8.043	19.430	6.564	0.414	7.056	0.025	0.002	99.727
01-JR-MA-214-041	41.244	0.020	20.214	4.364	20.463	4.967	0.459	7.554	0.007	0.000	99.292
01-JR-MA-217-001	42.174	0.202	20.483	3.928	20.821	5.004	0.370	7.480	0.021	0.001	100.484
01-JR-MA-217-002	41.960	0.209	19.687	5.006	20.648	5.204	0.403	7.440	0.028	0.002	100.587
01-JR-MA-217-003	41.736	0.676	19.497	3.702	20.025	5.828	0.311	8.023	0.026	0.000	99.824
01-JR-MA-217-004	41.013	0.216	19.123	5.459	18.279	6.213	0.504	9.075	0.017	0.000	99.899
01-JR-MA-217-005	42.144	0.252	21.619	2.638	20.402	4.857	0.412	8.231	0.023	0.002	100.580
01-JR-MA-217-006	41.625	0.052	21.472	2.378	17.819	5.437	0.582	10.819	0.012	0.003	100.199
01-JR-MA-217-007	41.935	0.106	19.931	4.447	21.178	5.474	0.285	6.724	0.023	0.002	100.105
01-JR-MA-218-001	41.042	0.257	19.467	5.134	20.525	5.302	0.414	7.607	0.040	0.000	99.788
01-JR-MA-218-002	42.001	0.550	19.261	4.316	20.179	5.770	0.291	7.785	0.037	0.000	100.190
01-JR-MA-218-003	41.900	0.521	20.959	2.687	20.688	4.942	0.338	8.151	0.049	0.000	100.235
01-JR-MA-218-004	41.289	0.747	18.340	6.004	20.498	5.826	0.362	7.040	0.069	0.000	100.175
01-JR-MA-218-005	41.717	0.291	19.735	4.983	21.147	5.298	0.351	6.859	0.044	0.000	100.425
01-JR-MA-218-006	40.994	0.002	21.202	3.448	19.880	5.464	0.578	8.175	0.013	0.005	99.761
01-JR-MA-218-007	42.136	0.046	20.655	4.083	20.281	5.276	0.440	7.561	0.019	0.000	100.497
01-JR-MA-218-008	41.201	0.282	17.687	7.192	19.358	6.201	0.417	7.390	0.029	0.000	99.757
01-JR-MA-218-009	41.585	0.079	18.484	6.631	20.989	5.074	0.402	6.798	0.000	0.000	100.042
01-JR-MA-218-010	41.513	0.715	17.325	7.183	20.229	6.032	0.337	6.737	0.046	0.006	100.123
01-JR-MA-218-011	41.923	0.345	20.122	4.392	21.302	4.841	0.346	6.966	0.049	0.000	100.286
01-JR-MA-218-012	41.569	0.203	19.693	4.187	20.085	5.264	0.414	7.961	0.043	0.001	99.420
01-JR-MA-218-018	41.814	0.243	19.183	5.359	20.847	5.539	0.294	6.581	0.015	0.000	99.875
01-JR-MA-218-019	42.310	0.177	19.185	5.311	20.920	5.552	0.299	6.528	0.014	0.002	100.298
01-JR-MA-219-001	42.277	0.241	21.625	2.460	21.394	4.452	0.375	7.208	0.045	0.000	100.077
01-JR-MA-219-002	41.132	0.058	19.156	5.880	20.304	5.335	0.439	7.081	0.025	0.005	99.415
01-JR-MA-219-003	42.074	0.203	20.013	4.130	21.111	5.238	0.287	7.012	0.021	0.000	100.089
01-JR-MA-219-004	41.574	0.075	17.794	7.333	19.783	5.993	0.421	7.196	0.039	0.001	100.209
01-JR-MA-219-005	40.795	0.123	19.133	5.914	19.327	5.767	0.550	7.932	0.040	0.000	99.581
01-JR-MA-221-001	41.229	0.692	16.954	7.692	19.349	6.416	0.394	7.407	0.069	0.000	100.202
01-JR-MA-221-002	41.514	0.357	20.615	3.486	21.668	4.981	0.303	6.748	0.042	0.000	99.714
01-JR-MA-221-003	41.317	0.474	19.927	3.919	20.365	5.287	0.414	7.902	0.051	0.005	99.661
01-JR-MA-221-004	42.077	0.126	21.286	2.495	21.290	4.733	0.374	7.655	0.031	0.000	100.067
01-JR-MA-223-001	41.705	0.559	20.448	2.824	19.523	5.071	0.408	9.715	0.055	0.002	100.310
01-JR-MA-223-003	42.007	0.284	20.903	3.066	21.748	4.834	0.298	6.748	0.033	0.000	99.921
01-JR-MA-223-004	42.141	0.135	19.401	5.642	20.316	5.437	0.392	7.033	0.021	0.001	100.519
01-JR-MA-223-006	41.660	0.259	18.971	5.460	19.765	5.679	0.355	7.465	0.021	0.000	99.635
01-JR-MA-230-001	42.073	0.109	20.138	4.572	20.637	5.241	0.410	7.475	0.032	0.000	100.687
01-JR-MA-243-001	41.676	0.097	20.356	4.504	20.114	5.761	0.382	7.638	0.017	0.002	100.547
01-JR-MA-243-002	41.939	0.093	20.374	4.451	21.029	5.050	0.348	7.008	0.039	0.000	100.331
01-JR-MA-245-001	41.527	0.059	20.255	4.667	20.692	4.972	0.455	7.438	0.015	0.000	100.080
01-JR-MA-245-002	41.501	0.038	19.991	4.857	19.918	4.931	0.483	8.124	0.012	0.000	99.855
01-JR-MA-245-003	41.668	0.958	17.985	5.622	20.975	5.834	0.288	6.845	0.039	0.005	100.219
01-JR-MA-246-002	40.954	0.464	16.872	8.290	19.709	6.053	0.340	6.830	0.038	0.000	99.550
01-JR-MA-246-003	41.666	0.000	20.986	3.488	20.618	5.010	0.370	7.176	0.002	0.004	99.320

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-250-001	41.413	0.228	19.813	4.896	20.563	5.363	0.383	7.264	0.040	0.003	99.966
01-JR-MA-250-002	40.799	0.537	17.494	7.422	19.306	6.354	0.412	7.644	0.048	0.003	100.019
01-JR-MA-250-004	42.001	0.324	21.374	2.468	20.755	4.622	0.401	7.941	0.040	0.000	99.926
01-JR-MA-253-001	41.996	0.255	19.662	5.020	21.088	5.248	0.355	6.585	0.038	0.004	100.251
01-JR-MA-253-005	42.137	0.330	20.118	4.286	21.043	4.950	0.340	7.208	0.043	0.001	100.456
01-JR-MA-253-007	42.019	0.588	20.055	3.401	21.146	5.155	0.313	7.274	0.051	0.000	100.002
01-JR-MA-253-008	42.016	0.222	20.962	3.144	21.051	4.692	0.308	7.408	0.026	0.000	99.829
01-JR-MA-253-009	42.041	0.316	20.795	3.161	20.913	5.009	0.353	7.758	0.031	0.000	100.377
01-JR-MA-253-010	41.466	0.181	19.718	4.831	20.875	4.885	0.375	6.734	0.037	0.006	99.108
01-JR-MA-253-014	42.243	0.996	19.927	2.596	20.797	4.991	0.282	8.245	0.072	0.000	100.149
01-JR-MA-254-001	41.699	0.036	20.646	4.458	20.517	4.698	0.480	7.774	0.023	0.000	100.331
01-JR-MA-254-002	40.949	0.252	18.749	6.395	19.667	5.743	0.525	7.643	0.048	0.000	99.971
01-JR-MA-254-003	41.008	0.038	18.491	6.887	19.265	6.242	0.496	7.303	0.024	0.000	99.754
01-JR-MA-254-007	41.860	0.036	21.103	3.500	19.990	5.144	0.447	7.991	0.011	0.000	100.082
01-JR-MA-254-008	41.445	0.121	20.831	3.691	20.314	5.224	0.403	7.698	0.016	0.001	99.744
01-JR-MA-255-001	41.789	0.087	21.170	3.259	21.101	4.787	0.463	7.082	0.020	0.000	99.758
01-JR-MA-255-002	41.957	0.032	19.385	5.894	20.701	4.883	0.487	6.912	0.010	0.000	100.261
01-JR-MA-255-004	42.213	0.019	21.006	4.005	21.402	4.640	0.430	6.806	0.016	0.000	100.537
01-JR-MA-256-001	42.482	0.040	20.879	3.391	20.593	4.846	0.411	7.334	0.003	0.000	99.979
01-JR-MA-256-002	40.975	0.014	19.078	6.228	20.218	5.736	0.475	6.862	0.011	0.001	99.598
01-JR-MA-256-003	41.983	0.242	21.321	2.625	20.018	4.985	0.416	8.377	0.043	0.004	100.014
01-JR-MA-256-004	41.335	0.131	17.354	7.664	19.951	6.483	0.323	6.396	0.000	0.001	99.638
01-JR-MA-256-005	41.748	0.170	21.371	2.892	20.209	4.903	0.428	8.379	0.042	0.004	100.146
01-JR-MA-257-001	41.429	0.007	21.258	3.707	20.005	5.280	0.587	7.924	0.006	0.000	100.203
01-JR-MA-257-002	42.393	0.025	22.092	2.166	20.535	4.718	0.386	8.118	0.013	0.000	100.446
01-JR-MA-257-003	41.673	0.011	19.277	5.610	20.545	5.519	0.410	6.814	0.003	0.000	99.862
01-JR-MA-257-005	41.737	0.279	21.673	2.107	20.868	4.669	0.390	8.212	0.042	0.001	99.978
01-JR-MA-257-006	40.992	0.133	18.414	6.800	20.038	5.899	0.386	6.959	0.028	0.000	99.649
01-JR-MA-257-007	40.847	0.350	18.939	5.534	19.912	5.623	0.390	7.885	0.013	0.000	99.493
01-JR-SG-001-001	40.883	0.026	17.673	7.663	19.883	6.528	0.326	6.350	0.000	0.000	99.332
01-JR-SG-001-002	41.435	0.883	20.084	2.526	20.147	5.256	0.315	8.369	0.060	0.000	99.075
01-JR-SG-001-003	41.562	0.917	20.084	2.980	20.520	5.313	0.326	8.009	0.060	0.000	99.771
01-JR-SG-001-004	41.868	0.268	20.408	3.345	21.166	4.957	0.305	7.001	0.047	0.002	99.367
01-JR-SG-001-006	41.047	0.047	20.152	4.330	19.030	5.497	0.584	8.426	0.004	0.000	99.117
01-JR-SG-001-008	41.964	0.335	19.763	4.562	20.746	5.071	0.346	7.173	0.050	0.001	100.011
01-JR-SG-001-009	41.070	0.722	18.767	4.900	20.966	5.557	0.289	6.611	0.052	0.000	98.934
01-JR-SG-001-011	42.238	0.733	20.745	2.158	21.030	4.999	0.295	7.715	0.055	0.000	99.968
01-JR-SG-001-012	41.277	0.203	19.223	5.326	20.940	5.504	0.305	7.085	0.022	0.001	99.886
01-JR-SG-001-013	41.962	0.210	20.607	3.469	21.058	5.036	0.296	6.928	0.023	0.003	99.592
01-JR-SG-001-016	41.572	0.782	20.630	2.503	20.673	5.033	0.351	8.252	0.060	0.005	99.861
01-JR-SG-001-018	41.547	0.772	19.642	3.631	20.715	5.358	0.302	7.611	0.058	0.000	99.636
01-JR-SG-001-020	41.588	0.037	20.018	4.483	19.977	4.937	0.497	8.228	0.009	0.001	99.775
01-JR-SG-001-021	41.052	0.773	19.757	3.392	20.186	5.414	0.318	8.046	0.048	0.000	98.986
01-JR-SG-001-023	41.465	0.272	18.980	5.753	20.690	5.277	0.365	6.999	0.036	0.000	99.837
01-JR-SG-001-024	41.587	0.386	18.848	5.590	20.507	5.243	0.376	7.147	0.040	0.000	99.724
01-JR-SG-001-025	41.500	0.533	20.076	3.966	20.896	5.187	0.299	6.851	0.034	0.000	99.342
01-JR-SG-001-026	41.133	0.372	18.865	5.727	19.286	5.613	0.504	8.052	0.063	0.004	99.619
01-JR-SG-001-027	41.186	0.175	18.105	7.166	19.138	6.205	0.501	7.310	0.049	0.000	99.835
01-JR-SG-001-028	41.663	0.247	20.480	3.543	21.375	5.003	0.308	6.687	0.028	0.005	99.339

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-SG-001-029	41.929	0.814	20.431	2.423	21.033	5.071	0.281	7.851	0.027	0.000	99.860
01-JR-SG-001-030	41.988	0.551	19.458	4.215	20.716	5.313	0.321	7.418	0.049	0.001	100.030
01-JR-SG-001-031	41.613	0.380	20.259	3.900	20.819	5.131	0.298	7.030	0.033	0.000	99.463
01-JR-SG-001-032	41.781	0.744	20.892	2.260	20.565	4.867	0.330	8.253	0.069	0.001	99.762
01-JR-SG-001-033	41.537	0.000	20.262	4.672	20.648	4.929	0.425	6.987	0.001	0.004	99.465
01-JR-SG-001-034	41.571	0.314	21.426	2.429	21.500	4.507	0.304	7.172	0.030	0.000	99.253
01-JR-SG-001-035	40.854	0.553	19.003	5.159	20.454	5.665	0.298	6.901	0.025	0.000	98.912
01-JR-SG-001-036	41.467	0.448	19.554	4.411	20.913	5.118	0.311	6.655	0.032	0.000	98.909
01-JR-SG-001-038	41.558	0.521	20.213	3.778	21.592	4.989	0.292	6.186	0.044	0.000	99.173
01-JR-SG-001-040	41.651	0.769	20.783	2.256	20.951	5.052	0.279	7.838	0.047	0.000	99.626
01-JR-SG-001-042	41.791	0.759	19.655	3.770	20.528	5.571	0.332	7.702	0.053	0.000	100.161
01-JR-SG-001-043	41.535	0.738	20.408	2.475	21.393	5.089	0.271	7.367	0.039	0.005	99.320
01-JR-SG-001-044	41.929	0.778	20.494	2.422	20.488	4.720	0.338	8.559	0.072	0.000	99.800
01-JR-SG-001-045	41.888	0.350	20.802	3.133	21.870	4.747	0.308	6.645	0.024	0.000	99.765
01-JR-SG-001-046	41.247	0.372	20.231	3.806	21.213	4.903	0.304	7.117	0.048	0.000	99.241
01-JR-SG-001-047	40.808	0.201	18.238	7.221	18.379	6.589	0.536	8.059	0.049	0.000	100.080
01-JR-SG-001-048	41.542	0.385	19.324	4.794	20.853	5.582	0.312	6.963	0.023	0.000	99.778
01-JR-SG-001-049	41.191	0.220	19.312	5.311	19.797	5.394	0.458	7.864	0.053	0.000	99.600
01-JR-SG-001-052	41.741	0.567	19.981	4.061	21.368	4.947	0.301	6.768	0.036	0.003	99.773
01-JR-SG-001-053	41.477	0.304	17.152	7.874	20.752	6.018	0.295	5.819	0.027	0.000	99.718
01-JR-SG-001-054	41.566	0.024	20.424	4.407	20.765	4.672	0.487	7.306	0.004	0.000	99.655
01-JR-SG-001-055	41.966	0.353	18.762	5.809	20.774	5.594	0.309	6.524	0.024	0.004	100.119
01-JR-SG-001-056	41.755	0.620	20.097	3.742	21.601	4.948	0.311	6.724	0.044	0.000	99.842
01-JR-SG-001-057	41.760	0.595	20.467	2.972	20.795	5.044	0.333	7.647	0.057	0.000	99.670
01-JR-SG-001-058	41.658	0.646	19.763	3.500	20.546	5.548	0.312	7.630	0.049	0.000	99.652
01-JR-SG-001-059	41.016	0.112	18.954	6.380	18.967	6.169	0.529	8.068	0.019	0.000	100.214
01-JR-SG-001-060	41.478	0.014	21.210	3.261	20.527	4.390	0.515	8.061	0.024	0.003	99.483
01-JR-SG-001-061	40.401	0.495	16.681	8.258	19.713	6.467	0.356	6.897	0.031	0.001	99.300
01-JR-SG-001-062	41.449	0.468	20.352	3.148	21.209	5.024	0.286	7.293	0.056	0.000	99.285
01-JR-SG-001-063	41.387	0.869	17.535	6.570	20.940	6.022	0.281	6.416	0.038	0.000	100.058
01-JR-SG-001-064	41.478	0.295	18.675	5.880	21.144	5.247	0.326	6.455	0.042	0.000	99.542
01-JR-SG-001-065	41.502	0.767	19.173	4.357	21.203	5.495	0.276	6.775	0.038	0.000	99.586
01-JR-SG-001-066	40.968	0.744	18.527	4.974	20.318	5.633	0.286	7.593	0.039	0.006	99.088
01-JR-SG-001-067	40.689	0.623	16.917	7.557	20.000	6.045	0.341	7.016	0.022	0.000	99.210
01-JR-SG-001-068	40.913	0.560	17.865	6.619	20.647	5.749	0.340	6.508	0.053	0.000	99.254
01-JR-SG-001-069	42.207	0.669	19.605	3.542	21.127	5.204	0.269	7.287	0.044	0.000	99.954
01-JR-SG-001-070	41.245	0.770	20.713	2.129	21.349	5.019	0.265	7.575	0.054	0.000	99.119
01-JR-SG-001-071	41.783	0.075	21.835	2.285	20.147	4.502	0.454	8.646	0.032	0.000	99.759
01-JR-SG-001-072	41.373	0.111	18.197	6.937	19.979	5.589	0.400	7.196	0.025	0.005	99.812
01-JR-SG-001-075	41.151	0.817	20.938	2.008	20.574	4.775	0.342	8.585	0.054	0.000	99.244
01-JR-SG-001-085	41.833	0.773	20.709	2.255	21.064	5.025	0.280	7.818	0.041	0.000	99.798
01-JR-SG-001-092	40.269	1.560	19.271	2.920	19.497	6.022	0.336	8.715	0.097	0.000	98.707
01-JR-SG-001-117	41.517	0.542	19.339	5.038	20.949	5.011	0.324	7.150	0.030	0.000	99.900
01-JR-SG-001-118	41.222	0.035	20.305	5.234	20.910	4.781	0.504	7.183	0.012	0.000	100.186
01-JR-SG-001-119	41.907	0.641	20.341	3.668	21.249	5.257	0.303	6.857	0.051	0.000	100.274
01-JR-SG-001-120	41.570	0.344	20.384	3.769	19.914	5.113	0.457	8.143	0.077	0.007	99.778
01-JR-SG-001-121	42.212	0.292	20.042	4.286	21.142	5.091	0.311	6.845	0.030	0.003	100.254
01-JR-SG-001-122	41.214	0.183	19.309	5.620	19.630	5.711	0.506	7.928	0.026	0.000	100.127
01-JR-SG-001-123	41.287	0.686	20.549	3.256	21.009	4.872	0.309	7.367	0.060	0.000	99.395

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-SG-001-124	41.266	0.878	18.559	5.297	20.921	5.567	0.280	6.712	0.041	0.000	99.521
01-JR-SG-001-125	42.151	0.783	20.685	2.790	20.550	5.282	0.335	8.045	0.057	0.000	100.678
01-JR-SG-001-126	41.511	0.372	19.552	5.397	21.470	5.263	0.296	6.132	0.040	0.000	100.033
01-JR-SG-001-127	41.728	0.219	20.681	4.041	20.299	5.152	0.445	7.870	0.039	0.000	100.474
01-JR-SG-001-128	41.848	0.048	21.754	2.934	21.202	4.729	0.395	7.201	0.004	0.000	100.115
01-JR-SG-001-129	42.232	0.682	20.452	3.433	21.659	4.781	0.314	6.813	0.059	0.000	100.425
01-JR-SG-001-130	41.827	0.567	20.463	3.689	21.004	5.303	0.319	7.230	0.044	0.006	100.452
01-JR-SG-001-134	41.453	0.412	17.580	7.490	20.589	5.902	0.315	6.309	0.045	0.000	100.095
01-JR-SG-001-135	42.073	0.186	20.914	3.130	20.456	5.040	0.408	7.925	0.020	0.006	100.158
01-JR-SG-001-166	42.176	0.759	20.549	2.106	21.085	4.953	0.297	7.814	0.051	0.005	99.795
01-JR-SG-001-167	41.994	0.731	20.746	2.281	20.562	5.204	0.337	8.093	0.046	0.000	99.994
01-JR-SG-003-001	41.204	0.030	18.553	6.561	18.593	6.891	0.523	7.387	0.003	0.000	99.745
01-JR-SG-007-001	41.517	0.063	20.011	5.045	20.175	5.292	0.502	7.329	0.011	0.000	99.945
01-JR-SG-007-002	41.931	0.014	20.864	3.759	19.793	5.617	0.528	7.730	0.008	0.001	100.245
01-JR-SG-008-001	41.762	0.053	20.199	4.536	19.487	5.574	0.530	7.938	0.011	0.004	100.094
01-JR-SG-009-001	40.866	1.064	15.694	9.122	20.021	6.494	0.336	6.132	0.081	0.000	99.810
01-JR-SG-010-001	41.625	0.692	19.987	3.523	20.827	5.196	0.313	7.516	0.058	0.000	99.737
01-JR-SG-010-002	41.702	0.104	21.478	2.352	20.691	4.421	0.397	8.126	0.029	0.004	99.304
01-JR-SG-010-003	41.362	0.029	20.941	3.354	18.890	5.683	0.638	8.928	0.007	0.000	99.832
01-JR-SG-010-004	42.082	0.571	20.564	2.780	20.805	5.187	0.374	7.687	0.057	0.006	100.113
01-JR-SG-010-005	41.898	0.077	20.502	3.927	19.991	5.284	0.521	7.647	0.023	0.001	99.871
01-JR-SG-011-001	41.439	0.011	20.566	3.944	19.654	5.157	0.614	8.236	0.018	0.002	99.641
01-JR-SG-012-001	41.395	0.131	19.798	5.161	19.275	5.660	0.493	8.511	0.009	0.002	100.435
01-JR-SG-012-002	41.654	0.224	17.023	8.606	19.748	6.419	0.384	6.123	0.028	0.004	100.213
01-JR-SG-012-003	41.061	0.037	21.200	3.138	20.156	5.300	0.466	7.924	0.003	0.000	99.285
01-JR-SG-012-005	41.481	0.251	18.694	6.438	19.953	5.813	0.397	7.260	0.030	0.002	100.319
01-JR-TM-002-001	41.418	0.024	19.192	5.706	20.130	5.524	0.387	7.297	0.009	0.000	99.687
01-JR-TM-002-002	42.033	0.017	19.110	5.968	20.738	4.987	0.461	6.824	0.016	0.004	100.158
01-JR-TM-002-003	42.192	0.018	21.633	2.574	19.541	5.247	0.507	8.789	0.009	0.004	100.514
01-JR-TM-005-001	42.092	0.121	22.014	2.171	20.438	4.688	0.426	8.499	0.027	0.000	100.476
01-JR-TM-005-002	41.226	0.102	20.564	3.804	19.465	5.319	0.484	8.618	0.018	0.000	99.600
01-JR-TM-005-003	41.965	0.592	20.642	2.429	20.724	5.172	0.344	8.069	0.054	0.000	99.991
01-JR-TM-005-004	41.643	0.495	20.371	3.224	21.537	4.552	0.319	7.056	0.052	0.000	99.249
01-JR-TM-005-005	41.691	0.790	21.129	2.092	21.171	5.002	0.295	7.874	0.055	0.003	100.102
01-JR-TM-005-007	41.054	0.015	19.111	5.950	19.332	5.567	0.524	8.153	0.025	0.000	99.731
01-JR-TM-005-008	41.538	0.132	21.553	2.566	19.990	4.655	0.474	8.967	0.028	0.000	99.903
01-JR-TM-005-009	41.137	0.212	18.135	6.803	20.339	5.913	0.323	6.769	0.025	0.000	99.656
01-JR-TM-005-010	41.395	0.146	19.533	5.087	19.566	5.239	0.495	8.330	0.023	0.000	99.814
01-JR-TM-005-017	41.476	0.786	20.846	2.098	20.528	4.954	0.364	8.725	0.079	0.000	99.858
01-JR-TM-005-018	41.132	0.282	19.021	5.804	20.587	5.759	0.305	6.818	0.035	0.000	99.743
01-JR-TM-005-019	41.842	0.136	20.496	4.149	19.985	5.316	0.440	8.096	0.030	0.003	100.493
01-JR-TM-006-001	41.946	0.195	18.981	5.425	20.728	5.658	0.308	6.719	0.022	0.000	99.982
GROUP I ECLOGITIC GARNETS (According to Na vs. Ti plot)											
01-JR-SG-001-100	40.229	0.439	21.476	0.063	11.788	8.620	0.376	16.693	0.089	0.000	99.773
GROUP II ECLOGITIC GARNETS											
01-JR-BD-001-003	41.908	0.161	22.194	1.519	19.874	4.531	0.316	9.352	0.051	0.000	99.906
01-JR-MA-003-004	37.817	0.204	20.594	0.005	0.651	25.705	1.755	12.066	0.000	0.000	98.797

Sample	SiO_2	TiO_2	Al_2O_3	Cr_2O_3	MgO	CaO	MnO	FeO	Na_2O	K_2O	Total
01-JR-MA-097-008	35.686	0.014	19.780	0.021	0.098	0.115	24.652	19.279	0.000	0.000	99.645
01-JR-MA-099-006	41.544	0.079	21.968	1.979	20.179	4.594	0.402	8.610	0.017	0.000	99.372
01-JR-MA-104-001	38.262	0.168	18.818	0.023	0.787	27.892	0.614	12.284	0.004	0.001	98.853
01-JR-MA-129-004	38.270	0.164	21.630	0.026	5.996	12.043	1.072	20.345	0.008	0.000	99.554
01-JR-MA-132-002	42.030	0.168	21.942	1.977	21.219	4.498	0.409	7.645	0.038	0.006	99.932
01-JR-MA-135-011	41.850	0.197	22.520	1.480	21.143	4.681	0.336	7.309	0.038	0.006	99.560
01-JR-MA-156-009	40.263	0.127	22.491	0.106	15.323	4.571	0.488	16.442	0.030	0.000	99.841
01-JR-MA-165-037	42.029	0.336	21.562	1.506	20.462	5.519	0.272	8.595	0.008	0.003	100.292
01-JR-MA-167-013	36.000	0.208	19.657	0.000	0.806	1.099	22.823	19.041	0.029	0.000	99.663
01-JR-MA-173-007	35.644	0.031	20.389	0.006	0.518	0.320	22.361	20.760	0.000	0.001	100.030
01-JR-MA-173-009	35.718	0.123	19.866	0.000	1.082	1.624	21.987	18.511	0.039	0.000	98.950
01-JR-MA-182-001	42.269	0.013	21.955	1.965	20.489	4.511	0.433	8.260	0.008	0.001	99.904
01-JR-MA-188-012	41.725	0.053	22.375	1.917	20.774	4.469	0.408	8.004	0.019	0.000	99.744
01-JR-MA-188-014	36.292	0.036	20.306	0.000	0.990	0.703	22.242	19.859	0.009	0.002	100.439
01-JR-MA-195-010	35.976	0.115	21.480	0.002	0.045	23.034	0.161	13.009	0.000	0.000	93.822
01-JR-MA-206-003	35.451	0.123	20.238	0.010	0.787	0.572	22.742	19.371	0.013	0.000	99.307
01-JR-MA-206-005	35.153	0.194	19.784	0.004	0.560	1.682	23.982	17.074	0.030	0.004	98.467
01-JR-MA-210-004	42.079	0.016	16.875	0.016	1.827	19.823	1.425	9.434	0.003	0.000	91.498
01-JR-MA-214-042	40.367	0.187	22.231	0.498	13.333	6.315	0.351	17.030	0.026	0.000	100.338
01-JR-MA-214-043	40.175	0.125	22.303	0.095	13.662	3.696	0.491	19.602	0.020	0.000	100.169
01-JR-MA-214-045	35.337	0.113	19.504	0.000	0.994	0.416	27.373	15.687	0.011	0.001	99.436
01-JR-MA-218-016	38.464	0.178	19.980	0.010	0.083	30.752	0.847	8.597	0.000	0.002	98.913
01-JR-MA-238-003	35.922	0.000	20.092	0.000	0.766	1.618	31.393	10.011	0.000	0.002	99.804
01-JR-MA-250-003	35.884	0.034	19.989	0.004	0.671	0.250	23.095	20.440	0.000	0.002	100.369
01-JR-MA-255-003	41.928	0.070	22.461	1.690	19.859	4.643	0.452	9.247	0.016	0.008	100.374
01-JR-SG-001-005	41.608	0.134	22.339	1.296	20.127	4.468	0.450	8.856	0.023	0.000	99.301
01-JR-SG-001-017	41.737	0.232	22.425	1.124	20.609	4.250	0.391	9.267	0.048	0.001	100.084
01-JR-SG-001-041	41.569	0.338	21.817	1.898	20.664	4.218	0.405	8.741	0.053	0.001	99.704
01-JR-SG-001-050	41.349	0.191	21.534	1.775	17.720	4.831	0.581	12.360	0.024	0.003	100.368
01-JR-SG-001-051	41.742	0.091	22.464	0.946	18.899	4.180	0.426	11.470	0.030	0.000	100.248
01-JR-SG-001-108	37.989	0.254	18.519	0.121	0.085	25.628	6.187	9.552	0.005	0.002	98.342
01-JR-SG-001-133	35.430	0.140	19.301	0.006	0.504	1.419	29.695	12.488	0.020	0.000	99.003
01-JR-SG-008-002	41.657	0.169	22.546	0.471	19.383	4.328	0.503	10.793	0.030	0.002	99.882
CR-POOR MEGACRYSTS											
01-JR-MA-015-002	41.224	0.565	21.169	1.704	19.320	4.835	0.407	10.356	0.049	0.000	99.629
01-JR-MA-074-007	41.460	0.466	21.176	1.893	19.865	5.063	0.380	9.249	0.035	0.000	99.587
01-JR-MA-074-008	41.279	0.620	21.406	0.539	18.331	5.000	0.437	12.066	0.061	0.000	99.739
01-JR-MA-123-018	41.088	0.649	21.696	0.634	18.836	5.395	0.412	10.766	0.032	0.007	99.515
01-JR-MA-123-019	41.300	0.964	20.495	1.355	19.325	4.598	0.367	10.628	0.109	0.000	99.141
01-JR-MA-123-023	41.333	0.519	21.158	1.732	19.333	4.897	0.436	10.017	0.041	0.002	99.468
01-JR-MA-135-026	41.209	0.876	20.912	1.248	19.541	4.645	0.365	10.413	0.096	0.000	99.305
01-JR-MA-135-027	42.265	0.737	20.672	1.525	21.375	4.908	0.266	7.844	0.043	0.000	99.635
01-JR-MA-139-008	41.620	0.424	22.158	0.236	19.198	4.270	0.408	11.105	0.058	0.005	99.482
01-JR-MA-139-009	41.804	0.729	20.798	1.889	20.892	4.973	0.280	8.064	0.042	0.002	99.483
01-JR-MA-140-002	42.010	0.555	21.295	1.614	19.169	4.955	0.399	9.932	0.048	0.001	99.978
01-JR-MA-140-004	42.545	0.664	21.996	1.308	21.819	4.121	0.295	7.238	0.069	0.002	100.057
01-JR-MA-143-008	41.763	0.739	21.305	1.579	20.293	4.935	0.356	8.672	0.064	0.001	99.707
01-JR-MA-144-004	42.255	0.510	21.656	1.710	21.566	4.408	0.299	7.454	0.047	0.000	99.905

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-144-014	41.585	0.603	22.119	0.169	19.686	4.338	0.428	10.955	0.091	0.000	99.974
01-JR-MA-144-015	41.840	0.714	21.926	0.167	19.440	4.417	0.427	10.895	0.092	0.000	99.918
01-JR-MA-144-016	41.969	0.577	22.370	0.459	20.133	4.542	0.385	9.442	0.057	0.002	99.936
01-JR-MA-154-003	41.222	0.709	20.941	1.597	19.129	5.469	0.400	9.916	0.045	0.000	99.428
01-JR-MA-154-004	41.262	0.766	20.861	1.591	19.360	5.485	0.405	9.932	0.043	0.000	99.705
01-JR-MA-156-011	41.165	0.568	21.537	1.565	19.740	5.018	0.359	9.355	0.040	0.003	99.350
01-JR-MA-156-012	42.031	0.611	21.795	0.910	19.322	5.194	0.404	10.291	0.030	0.000	100.588
01-JR-MA-162-011	42.003	0.942	20.639	1.529	20.088	4.428	0.377	9.672	0.108	0.000	99.786
01-JR-MA-162-012	41.976	0.583	21.536	1.284	20.482	4.617	0.341	9.273	0.054	0.001	100.147
01-JR-MA-165-027	41.670	0.788	22.317	0.238	19.869	4.315	0.434	10.524	0.104	0.005	100.264
01-JR-MA-165-029	41.046	0.801	21.499	0.620	19.461	4.446	0.380	10.910	0.083	0.003	99.249
01-JR-MA-165-030	41.895	0.483	22.466	0.260	19.882	4.336	0.390	9.993	0.056	0.009	99.770
01-JR-MA-165-031	40.967	0.827	21.594	0.148	18.711	4.943	0.427	11.394	0.099	0.000	99.110
01-JR-MA-173-010	41.795	0.537	21.559	1.526	21.220	4.587	0.299	8.104	0.060	0.000	99.687
01-JR-MA-180-014	40.983	0.585	21.181	1.579	19.314	5.305	0.406	10.004	0.032	0.001	99.390
01-JR-MA-180-028	41.234	0.645	21.289	1.738	19.232	4.999	0.402	10.371	0.046	0.000	99.956
01-JR-MA-183-007	41.297	0.588	21.124	1.819	19.166	5.082	0.412	10.210	0.045	0.000	99.743
01-JR-MA-183-008	41.589	0.480	21.838	1.245	19.443	5.106	0.416	10.077	0.042	0.006	100.242
01-JR-MA-188-024	41.796	0.658	21.257	1.111	21.122	4.437	0.253	8.485	0.057	0.000	99.176
01-JR-MA-195-009	41.110	0.469	21.252	1.736	19.964	5.162	0.375	9.283	0.026	0.003	99.380
01-JR-MA-210-001	41.658	0.731	20.967	1.902	20.452	4.841	0.346	8.652	0.066	0.001	99.616
01-JR-MA-210-002	41.717	0.522	22.019	0.132	19.738	4.227	0.413	10.640	0.048	0.004	99.460
01-JR-MA-210-003	41.714	0.719	21.935	0.144	19.080	4.640	0.444	11.266	0.090	0.000	100.032
01-JR-MA-212-007	42.232	0.530	21.845	0.466	19.324	4.364	0.383	11.207	0.056	0.003	100.410
01-JR-MA-212-008	41.332	0.607	21.856	0.548	19.436	4.337	0.387	11.022	0.049	0.000	99.574
01-JR-MA-212-009	41.809	0.430	21.836	0.656	19.591	4.417	0.395	10.952	0.047	0.000	100.133
01-JR-MA-212-011	41.491	0.853	20.868	1.817	20.129	4.637	0.342	9.814	0.077	0.000	100.028
01-JR-MA-214-035	41.010	0.687	21.244	1.548	20.048	4.604	0.342	9.777	0.059	0.000	99.319
01-JR-MA-214-036	41.925	0.844	21.327	0.991	19.584	4.572	0.348	10.510	0.086	0.001	100.188
01-JR-MA-215-003	41.617	0.479	21.639	0.353	19.232	4.404	0.392	11.371	0.054	0.001	99.542
01-JR-MA-217-008	41.984	0.775	21.380	0.860	19.461	4.592	0.360	10.796	0.087	0.000	100.295
01-JR-MA-217-009	41.725	0.619	20.970	1.682	19.297	5.389	0.393	9.488	0.025	0.000	99.588
01-JR-MA-218-013	41.492	0.506	21.624	0.814	19.578	4.509	0.380	10.722	0.041	0.000	99.666
01-JR-MA-218-014	41.180	0.673	20.925	1.987	19.217	5.418	0.402	10.006	0.024	0.000	99.832
01-JR-MA-221-005	41.044	0.598	21.338	1.805	19.435	5.534	0.380	9.589	0.025	0.000	99.748
01-JR-MA-253-012	41.455	0.730	21.338	1.222	20.061	4.630	0.341	9.820	0.072	0.000	99.669
01-JR-MA-253-013	40.589	0.661	21.713	0.365	17.979	4.997	0.466	12.697	0.079	0.004	99.550
01-JR-MA-254-004	41.644	0.509	22.189	0.862	20.033	4.502	0.386	9.982	0.044	0.002	100.153
01-JR-MA-254-005	40.677	0.569	21.652	0.036	17.537	4.645	0.534	13.992	0.036	0.000	99.678
01-JR-SG-001-007	41.563	0.702	20.822	1.930	21.154	4.935	0.298	7.974	0.040	0.001	99.419
01-JR-SG-001-010	41.895	0.755	20.981	1.696	20.148	4.104	0.354	9.868	0.081	0.001	99.883
01-JR-SG-001-014	41.671	0.664	20.957	1.865	20.783	4.453	0.291	8.477	0.042	0.002	99.205
01-JR-SG-001-015	42.154	0.670	21.146	1.966	21.528	4.921	0.266	7.480	0.051	0.000	100.182
01-JR-SG-001-019	42.557	0.466	22.084	1.319	21.918	4.755	0.272	6.929	0.031	0.005	100.336
01-JR-SG-001-022	41.755	0.512	21.853	1.529	20.854	4.178	0.335	8.448	0.044	0.000	99.508
01-JR-SG-001-037	41.738	0.523	21.198	1.721	20.693	4.657	0.320	8.764	0.040	0.004	99.658
01-JR-SG-001-073	41.223	0.936	21.044	1.557	20.308	4.718	0.376	9.625	0.097	0.000	99.884
01-JR-SG-001-074	41.398	0.735	21.926	0.124	18.850	4.690	0.441	11.170	0.089	0.000	99.423
01-JR-SG-001-076	41.903	0.824	21.081	1.677	20.410	4.746	0.375	8.970	0.074	0.000	100.060

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-SG-001-077	41.363	0.467	22.354	0.247	19.244	4.344	0.432	11.167	0.055	0.000	99.673
01-JR-SG-001-078	41.819	1.284	21.121	0.718	20.653	4.388	0.334	9.391	0.088	0.000	99.796
01-JR-SG-001-079	41.005	1.970	19.651	1.548	19.512	6.580	0.339	8.783	0.112	0.004	99.504
01-JR-SG-001-080	41.345	0.517	22.209	0.190	19.369	4.167	0.431	11.143	0.076	0.000	99.447
01-JR-SG-001-081	42.076	0.814	21.256	1.382	20.563	4.218	0.373	9.364	0.091	0.003	100.140
01-JR-SG-001-082	41.609	0.949	21.546	0.982	20.456	4.701	0.347	9.314	0.075	0.003	99.982
01-JR-SG-001-083	41.257	0.663	22.215	0.220	19.083	4.352	0.438	11.233	0.086	0.003	99.850
01-JR-SG-001-084	41.779	0.762	21.588	1.588	20.552	4.631	0.387	8.805	0.068	0.000	100.160
01-JR-SG-001-086	41.339	1.315	21.586	0.516	20.641	4.601	0.322	9.079	0.081	0.002	99.482
01-JR-SG-001-087	41.625	0.679	21.617	1.460	21.505	4.776	0.290	7.358	0.040	0.000	99.350
01-JR-SG-001-088	41.466	0.496	22.094	0.198	19.095	4.296	0.424	11.571	0.037	0.000	99.677
01-JR-SG-001-089	41.612	0.669	22.110	0.463	20.198	4.715	0.389	9.221	0.083	0.000	99.460
01-JR-SG-001-090	42.030	0.623	21.028	1.598	21.133	4.642	0.275	8.614	0.063	0.006	100.012
01-JR-SG-001-091	41.559	0.709	21.435	1.148	20.187	4.720	0.344	9.839	0.068	0.000	100.009
01-JR-SG-001-093	41.452	0.518	22.290	0.148	19.609	4.075	0.444	10.943	0.070	0.000	99.549
01-JR-SG-001-094	41.984	0.451	22.143	0.292	19.437	4.396	0.415	10.829	0.054	0.000	100.001
01-JR-SG-001-095	41.452	0.717	21.258	1.119	19.757	4.763	0.401	10.204	0.066	0.002	99.739
01-JR-SG-001-096	41.495	0.562	22.221	0.169	19.152	4.568	0.448	11.031	0.067	0.000	99.713
01-JR-SG-001-097	41.306	0.697	21.438	1.065	19.215	5.131	0.390	10.290	0.107	0.000	99.639
01-JR-SG-001-098	41.901	0.860	21.333	0.595	19.715	4.436	0.403	10.214	0.100	0.000	99.577
01-JR-SG-001-099	41.483	0.529	22.288	0.151	19.707	4.308	0.413	10.504	0.061	0.000	99.444
01-JR-SG-001-101	41.515	0.673	21.854	0.128	19.194	4.253	0.436	11.148	0.073	0.001	99.275
01-JR-SG-001-102	41.132	0.856	21.578	0.218	18.861	4.733	0.427	11.137	0.113	0.000	99.055
01-JR-SG-001-103	41.018	0.506	22.424	0.122	19.387	4.341	0.423	10.933	0.057	0.000	99.211
01-JR-SG-001-104	41.495	0.450	22.390	0.130	19.157	4.237	0.436	11.157	0.042	0.000	99.494
01-JR-SG-001-105	41.759	0.913	21.217	1.465	19.799	4.464	0.367	9.714	0.097	0.004	99.799
01-JR-SG-001-106	41.691	0.827	21.964	0.339	19.891	4.398	0.360	10.464	0.075	0.000	100.009
01-JR-SG-007-003	41.593	0.656	20.772	1.789	19.137	5.606	0.383	9.485	0.042	0.000	99.463
01-JR-TM-004-001	41.794	0.456	21.594	0.867	20.056	4.522	0.356	10.021	0.055	0.000	99.721
01-JR-TM-005-011	41.155	0.736	21.227	1.899	21.380	4.906	0.281	7.481	0.030	0.002	99.097
01-JR-TM-005-012	41.543	0.580	22.081	0.179	19.178	4.269	0.407	11.073	0.065	0.002	99.377
01-JR-TM-005-013	41.075	1.465	20.574	1.234	19.648	5.884	0.331	8.726	0.089	0.000	99.046
01-JR-TM-005-014	42.228	0.739	20.546	1.992	20.825	4.940	0.284	7.850	0.054	0.001	99.459
01-JR-TM-005-015	41.897	0.739	21.214	1.581	21.645	4.827	0.283	7.629	0.038	0.007	99.860
01-JR-TM-005-016	41.422	0.818	20.658	1.964	20.243	4.931	0.359	9.130	0.084	0.002	99.611
01-JR-TM-005-020	42.260	0.435	21.226	1.982	21.383	4.292	0.316	7.783	0.064	0.002	99.743
CRUSTAL GARNETS											
01-JR-BD-001-004	38.561	0.093	21.301	0.072	7.846	6.383	0.549	25.237	0.000	0.000	100.042
01-JR-MA-001-001	38.053	0.075	21.423	0.000	5.192	9.763	0.445	25.092	0.000	0.002	100.045
01-JR-MA-001-002	37.094	0.056	20.671	0.000	1.899	9.231	0.869	30.186	0.000	0.000	100.006
01-JR-MA-001-003	37.253	0.094	21.339	0.009	3.809	11.211	0.863	24.613	0.000	0.000	99.191
01-JR-MA-001-004	37.335	0.130	21.300	0.014	2.743	14.022	0.458	23.579	0.000	0.008	99.589
01-JR-MA-002-001	36.365	0.038	20.058	0.000	0.610	8.371	1.185	33.059	0.000	0.000	99.686
01-JR-MA-003-001	37.875	0.023	21.393	0.000	6.057	7.066	1.608	25.896	0.000	0.006	99.924
01-JR-MA-003-002	38.157	0.136	21.586	0.022	6.260	10.703	0.605	22.502	0.000	0.003	99.974
01-JR-MA-015-003	38.159	0.027	20.710	0.001	3.900	12.739	0.607	23.630	0.000	0.000	99.773
01-JR-MA-059-002	37.029	0.044	20.557	0.000	2.701	11.529	1.012	26.287	0.000	0.005	99.164
01-JR-MA-059-003	37.509	0.140	20.649	0.009	4.128	11.227	1.499	24.129	0.000	0.004	99.294

Sample	SiO_2	TiO_2	Al_2O_3	Cr_2O_3	MgO	CaO	MnO	FeO	Na_2O	K_2O	Total
01-JR-MA-060-001	36.899	0.020	20.512	0.028	1.763	10.830	5.276	24.425	0.000	0.006	99.759
01-JR-MA-065-001	37.669	0.065	20.776	0.000	4.596	10.411	1.320	24.635	0.005	0.000	99.479
01-JR-MA-073-004	37.249	0.047	20.367	0.008	1.381	10.820	1.749	28.095	0.003	0.002	99.721
01-JR-MA-112-001	39.118	0.078	22.380	0.000	11.420	5.116	0.461	21.218	0.002	0.002	99.795
01-JR-MA-123-009	36.483	0.014	20.379	0.003	1.744	3.799	0.436	37.078	0.000	0.000	99.936
01-JR-MA-135-030	36.797	0.010	20.858	0.021	3.892	1.020	4.467	32.413	0.000	0.003	99.481
01-JR-MA-135-031	36.100	0.028	20.784	0.000	2.409	0.567	6.665	32.918	0.015	0.000	99.486
01-JR-MA-137-002	38.090	0.096	21.132	0.011	6.605	7.104	0.791	26.146	0.000	0.005	99.980
01-JR-MA-138-004	35.789	0.073	19.808	0.000	0.829	1.018	16.881	25.503	0.011	0.002	99.914
01-JR-MA-141-001	37.566	0.182	20.198	0.000	1.279	12.640	5.539	22.686	0.001	0.000	100.091
01-JR-MA-141-002	35.538	0.017	20.076	0.000	1.239	0.775	12.653	29.144	0.000	0.003	99.445
01-JR-MA-143-009	38.923	0.068	21.530	0.173	8.138	5.729	0.935	24.815	0.003	0.000	100.314
01-JR-MA-156-010	35.899	0.037	19.993	0.001	1.040	0.306	21.103	21.799	0.009	0.004	100.191
01-JR-MA-165-033	36.969	0.112	20.356	0.026	0.310	9.044	7.435	26.036	0.000	0.000	100.288
01-JR-MA-165-038	39.176	0.076	21.849	0.119	9.892	3.922	0.499	25.102	0.000	0.000	100.635
01-JR-MA-165-039	35.850	0.079	20.160	0.010	0.752	0.666	18.670	23.054	0.024	0.002	99.267
01-JR-MA-173-008	36.095	0.069	20.063	0.000	0.858	0.303	20.582	22.164	0.000	0.000	100.134
01-JR-MA-177-001	38.415	0.201	22.096	0.048	10.078	5.861	0.421	21.896	0.005	0.001	99.022
01-JR-MA-181-021	36.995	0.028	20.927	0.000	2.432	0.344	6.262	33.785	0.000	0.006	100.779
01-JR-MA-189-003	37.031	0.024	20.397	0.000	1.421	8.543	1.236	31.553	0.000	0.000	100.205
01-JR-MA-191-003	35.654	0.059	20.066	0.012	1.103	0.981	13.287	28.001	0.008	0.000	99.171
01-JR-MA-191-004	36.129	0.059	20.237	0.017	1.136	0.966	11.552	29.335	0.015	0.000	99.446
01-JR-MA-201-001	35.495	0.020	20.161	0.000	1.194	0.195	15.195	26.708	0.000	0.000	98.968
01-JR-MA-206-001	35.527	0.028	19.845	0.010	0.446	0.767	18.452	24.677	0.000	0.000	99.754
01-JR-MA-206-002	37.827	0.096	21.337	0.000	5.618	3.953	1.737	30.176	0.003	0.000	100.747
01-JR-MA-206-004	35.958	0.000	20.009	0.005	0.237	0.118	19.777	24.383	0.000	0.004	100.491
01-JR-MA-214-003	39.595	0.017	21.823	0.144	10.832	3.693	0.449	23.968	0.000	0.002	100.523
01-JR-MA-214-008	36.218	0.093	19.992	0.000	0.680	0.856	12.177	29.845	0.000	0.000	99.861
01-JR-MA-214-019	37.189	0.008	21.281	0.046	5.536	1.607	1.541	32.708	0.000	0.000	99.916
01-JR-MA-214-021	36.395	0.078	20.076	0.000	0.804	0.856	17.324	24.445	0.000	0.000	99.978
01-JR-MA-214-023	38.235	0.041	21.710	0.056	9.331	1.178	1.091	28.245	0.000	0.000	99.887
01-JR-MA-214-044	35.771	0.081	20.264	0.001	1.348	0.662	13.325	28.036	0.009	0.000	99.497
01-JR-MA-214-046	35.766	0.037	20.064	0.007	0.759	0.244	17.728	24.782	0.001	0.007	99.395
01-JR-MA-214-047	36.334	0.058	19.801	0.000	0.401	0.563	21.358	21.485	0.000	0.000	100.000
01-JR-MA-218-015	35.888	0.037	19.892	0.016	1.009	0.308	21.165	22.030	0.001	0.003	100.349
01-JR-MA-220-001	38.142	0.030	21.291	0.009	5.639	3.586	6.572	24.954	0.016	0.002	100.241
01-JR-MA-223-002	36.549	0.000	20.639	0.000	2.311	0.547	8.613	31.451	0.000	0.004	100.114
01-JR-MA-238-001	36.583	0.098	20.505	0.019	1.219	5.197	5.977	30.298	0.000	0.000	99.896
01-JR-MA-238-002	35.336	0.045	20.208	0.000	0.683	0.144	19.899	22.938	0.000	0.004	99.257
01-JR-MA-243-003	38.575	0.077	21.188	0.133	8.706	4.295	0.715	26.148	0.000	0.000	99.837
01-JR-MA-246-001	35.541	0.036	20.272	0.000	0.772	0.293	21.350	21.883	0.000	0.000	100.147
01-JR-MA-246-004	35.627	0.052	20.344	0.013	0.931	0.655	16.752	24.964	0.005	0.000	99.343
01-JR-MA-246-005	36.212	0.035	20.147	0.000	1.070	0.332	19.537	22.423	0.007	0.002	99.765
01-JR-MA-253-003	36.060	0.016	20.769	0.006	3.171	0.487	0.573	38.442	0.000	0.001	99.525
01-JR-SG-001-039	37.264	0.038	21.036	0.000	4.715	2.400	1.035	33.607	0.000	0.001	100.096
01-JR-SG-001-131	36.642	0.081	20.857	0.013	1.162	8.833	1.224	30.427	0.000	0.004	99.243
01-JR-SG-001-132	38.949	0.039	21.986	0.060	11.700	1.138	0.400	25.669	0.000	0.000	99.941
01-JR-SG-001-165	36.782	0.082	20.293	0.000	1.677	7.215	4.853	28.788	0.000	0.002	99.692
01-JR-TM-005-021	36.506	0.098	20.302	0.199	2.093	2.603	10.207	27.830	0.009	0.000	99.847

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-TM-007-001	36.864	0.059	20.905	0.000	1.038	9.844	6.290	25.474	0.000	0.003	100.477
GROSSULAR											
01-JR-MA-003-003	37.055	0.558	18.865	0.022	0.291	31.046	1.235	9.001	0.044	0.000	98.117
01-JR-MA-066-001	38.161	0.170	20.240	0.000	0.154	32.192	0.529	7.421	0.010	0.003	98.880
01-JR-MA-067-002	38.543	0.260	18.614	0.004	0.255	32.586	0.529	8.719	0.000	0.002	99.512
01-JR-MA-104-002	38.183	0.255	19.386	0.000	0.361	31.701	0.289	8.714	0.008	0.000	98.897
01-JR-MA-106-001	38.038	0.268	17.092	0.004	0.143	32.822	0.651	10.061	0.008	0.000	99.087
01-JR-MA-106-002	37.843	0.271	19.025	0.000	0.271	31.243	0.647	9.398	0.014	0.005	98.715
01-JR-MA-140-005	38.012	0.251	20.106	0.000	0.094	34.004	0.502	6.155	0.006	0.000	99.130
01-JR-MA-165-028	36.172	0.028	6.091	0.011	0.042	33.435	0.186	21.727	0.000	0.001	97.693
01-JR-MA-210-006	38.389	0.162	21.280	0.000	0.120	35.304	0.287	3.932	0.000	0.000	99.474
01-JR-MA-214-037	38.179	0.041	15.265	0.002	0.085	35.308	0.350	9.728	0.005	0.000	98.963
01-JR-MA-255-005	38.915	0.129	18.718	0.026	0.058	34.711	0.307	6.256	0.000	0.005	99.125
01-JR-SG-001-107	38.264	1.355	18.794	0.000	0.121	34.853	0.350	5.356	0.002	0.000	99.095
01-JR-SG-001-109	38.108	0.491	15.365	0.014	0.074	33.307	1.059	10.168	0.000	0.000	98.586
UVAROVITE											
01-JR-MA-001-005	37.285	0.188	12.488	10.267	0.079	33.553	1.002	3.954	0.004	0.000	98.820
01-JR-MA-052-001	37.487	0.528	15.439	5.612	0.133	33.300	0.840	5.051	0.002	0.000	98.392
01-JR-MA-075-006	37.197	0.446	14.052	7.525	0.162	30.765	1.767	6.845	0.011	0.002	98.772
01-JR-MA-129-005	36.865	0.362	11.000	11.942	0.182	31.074	1.720	5.518	0.000	0.000	98.663
01-JR-MA-129-006	37.245	0.495	15.703	5.715	0.140	32.792	1.184	5.142	0.005	0.000	98.421
01-JR-MA-210-005	37.433	0.300	15.336	2.384	0.132	34.752	0.877	7.440	0.000	0.001	98.655
01-JR-MA-223-005	36.138	0.318	6.220	14.830	0.057	33.490	0.571	7.436	0.003	0.000	99.063
01-JR-MA-254-006	36.564	0.253	11.526	13.007	0.366	30.015	5.146	0.981	0.006	0.001	97.865
ANDRADITE											
01-JR-MA-132-006	33.633	1.050	1.879	0.000	0.136	23.632	7.967	28.220	0.050	0.005	100.196
01-JR-MA-187-004	32.503	5.452	1.567	0.000	0.470	32.225	0.304	25.880	0.131	0.000	99.190
01-JR-MA-187-005	34.483	1.453	1.781	0.013	0.112	30.826	1.093	28.700	0.037	0.002	99.584
01-JR-MA-253-015	34.917	2.172	2.509	0.015	0.303	32.715	0.232	26.202	0.058	0.000	99.531

Sample	SiO_2	TiO_2	Nb_2O_5	Al_2O_3	Cr_2O_3	V_2O_5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe_2O_3	FeO	[illegible]
CHROMITES															
DIAMOND INCLUSION AND INTERGROWTH															
01-JR-MA-167-026	0.161	0.253	0.000	7.885	60.815	0.038	13.608	0.238	16.821	0.156	0.036	100.011	4.629	12.656	100.475
01-JR-MA-212-017	0.113	0.288	0.002	6.595	62.991	0.028	14.012	0.262	15.285	0.216	0.025	99.817	4.045	11.645	100.222
01-JR-MA-214-065	0.221	0.170	0.000	6.550	66.045	0.189	14.654	0.135	12.082	0.091	0.045	100.182	0.941	11.235	100.276
01-JR-MA-214-104	0.206	0.057	0.000	9.178	63.817	0.126	14.903	0.247	11.555	0.098	0.040	100.227	0.680	10.944	100.295
01-JR-MA-237-009	0.202	0.173	0.000	7.180	63.123	0.060	15.779	0.123	12.699	0.192	0.049	99.580	3.938	9.156	99.975
01-JR-MA-246-016	0.228	0.157	0.000	3.355	60.229	0.033	0.372	2.107	31.550	0.085	1.426	99.542	2.918	28.925	99.834
01-JR-SG-007-018	0.209	0.050	0.043	8.095	61.972	0.082	8.115	0.347	20.365	0.088	0.477	99.843	0.000	20.365	99.843
01-JR-TM-008-005	0.079	0.448	0.000	8.351	62.289	0.198	13.106	0.182	14.463	0.071	0.073	99.260	0.939	13.618	99.354
FIELD UNIQUE TO KIMBERLITE AND LAMPROITE															
01-JR-MA-074-028	0.058	2.446	0.000	11.243	47.632	0.320	9.131	0.308	27.334	0.173	0.122	98.767	6.173	21.779	99.385
01-JR-MA-183-010	0.127	1.971	0.010	11.271	53.092	0.242	14.027	0.190	18.767	0.167	0.090	99.954	4.906	14.353	100.446
01-JR-MA-210-018	0.096	3.182	0.036	4.432	50.398	0.436	9.429	0.330	30.502	0.169	0.089	99.099	10.158	21.362	100.117
01-JR-MA-214-118	0.152	1.657	0.044	8.718	55.528	0.246	12.112	0.240	20.948	0.143	0.075	99.863	4.803	16.627	100.344
01-JR-MA-214-222	0.110	2.628	0.050	5.842	57.947	0.398	12.300	0.242	20.109	0.144	0.077	99.847	3.548	16.916	100.203
01-JR-MA-233-004	0.154	3.030	0.072	9.551	52.601	0.165	13.244	0.192	20.441	0.172	0.089	99.711	4.799	16.123	100.192
01-JR-MA-246-006	0.105	2.012	0.000	5.742	52.868	0.261	9.395	0.340	27.760	0.140	0.104	98.727	8.481	20.129	99.577
01-JR-MA-253-032	0.066	2.775	0.000	12.025	44.569	0.445	8.857	0.268	29.786	0.252	0.101	99.144	7.596	22.951	99.905
01-JR-SG-001-162	0.079	2.026	0.018	2.206	56.674	0.316	9.604	0.290	27.551	0.166	0.090	99.020	8.977	19.473	99.919
01-JR-SG-001-163	0.077	2.305	0.000	1.680	56.311	0.473	8.749	0.337	28.925	0.188	0.108	99.153	8.666	21.127	100.021
01-JR-SG-001-264	0.071	3.440	0.000	1.274	48.863	0.500	7.523	0.382	35.561	0.194	0.119	97.927	13.272	23.618	99.257
01-JR-TM-005-045	0.065	4.012	0.000	1.987	48.774	0.616	8.346	0.349	33.870	0.197	0.113	98.329	11.749	23.298	99.506
NON KIMBERLITIC/LAMPROITIC FIELD															
01-JR-MA-004-013	0.110	1.139	0.064	31.775	28.308	0.124	14.957	0.160	22.174	0.192	0.107	99.110	7.941	15.029	99.906
01-JR-MA-040-012	0.150	1.460	0.044	30.510	29.935	0.168	15.257	0.151	20.199	0.214	0.061	98.149	6.383	14.456	98.788
01-JR-MA-074-022	0.117	1.393	0.000	29.481	31.293	0.163	15.171	0.165	20.101	0.200	0.070	98.154	6.484	14.266	98.804
01-JR-MA-075-019	0.140	1.991	0.000	28.379	30.837	0.214	14.708	0.182	22.134	0.163	0.071	98.819	7.159	15.692	99.536
01-JR-MA-102-011	0.122	2.213	0.000	30.253	26.716	0.188	14.916	0.155	25.070	0.170	0.077	99.880	9.852	16.205	100.867
01-JR-MA-123-037	0.079	1.536	0.025	28.492	30.755	0.189	13.521	0.235	23.566	0.129	0.088	98.615	7.380	16.925	99.354
01-JR-MA-123-044	0.214	1.147	0.000	35.603	27.474	0.091	17.193	0.132	17.326	0.262	0.055	99.497	5.551	12.331	100.053
01-JR-MA-123-046	0.227	0.753	0.000	37.550	26.606	0.145	17.697	0.166	16.265	0.270	0.067	99.746	5.148	11.633	100.262
01-JR-MA-123-048	0.144	1.691	0.027	36.839	21.973	0.171	16.269	0.140	21.316	0.210	0.084	98.864	7.754	14.339	99.641
01-JR-MA-123-049	0.122	1.436	0.006	34.286	27.672	0.196	16.345	0.158	19.763	0.228	0.081	100.293	6.422	13.984	100.936
01-JR-MA-123-056	0.116	1.208	0.002	32.883	29.447	0.141	15.762	0.195	19.509	0.231	0.084	99.578	6.040	14.074	100.183
01-JR-MA-126-028	0.235	0.625	0.018	38.705	25.249	0.177	17.452	0.137	17.045	0.274	0.047	99.964	5.308	12.268	100.496
01-JR-MA-142-015	0.152	1.984	0.042	32.034	27.195	0.171	15.722	0.166	21.780	0.186	0.083	99.515	7.632	14.913	100.280
01-JR-MA-165-088	0.159	2.387	0.013	29.088	31.012	0.181	14.924	0.166	21.902	0.248	0.101	100.181	6.397	16.146	100.822
01-JR-MA-249-001	0.133	1.577	0.000	28.905	31.965	0.175	14.978	0.158	21.158	0.219	0.089	99.357	6.801	15.039	100.038
01-JR-SG-002-009	0.292	1.652	0.049	29.523	31.442	0.208	14.437	0.316	20.985	0.172	0.101	99.177	5.394	16.132	99.717
OVERLAP FIELD (possibly kimberlitic)															
01-JR-MA-010-032	0.145	0.253	0.012	11.906	50.499	0.162	2.647	0.439	32.574	0.119	0.101	98.857	3.266	29.636	99.184
01-JR-MA-010-033	0.119	0.422	0.000	13.164	52.146	0.208	9.788	0.236	22.363	0.110	0.098	98.654	3.477	19.234	99.002

Sample	SiO2	TiO2	Nb2O5	Al2O3	Cr2O3	V2O3	MgO	MnO	FeO*	NiO	ZnO	Total	Fe2O3	FeO	Total
01-JR-MA-014-034	0.101	0.544	0.000	12.079	51.371	0.232	10.299	0.230	23.084	0.106	0.071	98.117	5.319	18.298	98.650
01-JR-MA-014-036	0.058	0.525	0.010	12.944	51.763	0.269	11.406	0.254	21.215	0.097	0.060	98.601	4.823	16.875	99.084
01-JR-MA-014-037	0.111	0.465	0.030	13.066	49.762	0.292	8.234	0.268	26.576	0.068	0.098	98.970	5.170	21.924	99.488
01-JR-MA-014-057	0.177	0.282	0.000	12.357	55.344	0.121	12.566	0.203	17.521	0.166	0.024	98.761	3.088	14.742	99.070
01-JR-MA-015-016	0.107	0.866	0.027	1.826	41.179	0.133	1.976	0.663	49.443	0.219	0.246	96.685	23.028	28.722	98.992
01-JR-MA-015-017	0.147	0.336	0.000	11.896	52.495	0.126	10.151	0.267	22.491	0.120	0.088	98.117	4.848	18.129	98.603
01-JR-MA-023-008	0.176	0.657	0.000	32.870	32.643	0.119	17.063	0.155	14.965	0.269	0.062	98.979	3.937	11.422	99.373
01-JR-MA-023-009	0.122	0.473	0.000	12.011	51.295	0.258	10.044	0.263	23.653	0.113	0.086	98.318	5.510	18.695	98.870
01-JR-MA-023-010	0.097	0.402	0.000	13.958	50.902	0.203	10.711	0.223	21.638	0.134	0.100	98.368	4.264	17.801	98.795
01-JR-MA-025-006	0.152	0.292	0.000	12.458	54.946	0.117	11.351	0.214	19.190	0.131	0.064	98.915	2.856	16.620	99.201
01-JR-MA-029-004	0.092	0.463	0.000	11.944	51.371	0.195	9.641	0.257	24.829	0.091	0.062	98.945	6.017	19.415	99.548
01-JR-MA-029-005	0.138	0.309	0.006	12.938	53.418	0.149	10.822	0.235	20.640	0.149	0.069	98.873	3.476	17.512	99.221
01-JR-MA-029-006	0.077	0.475	0.006	13.276	51.329	0.203	11.405	0.250	21.267	0.126	0.060	98.474	5.031	16.740	98.978
01-JR-MA-029-007	0.088	0.407	0.014	12.642	51.577	0.222	9.893	0.216	22.921	0.105	0.092	98.177	4.505	18.867	98.628
01-JR-MA-029-008	0.141	0.291	0.000	11.631	49.810	0.140	1.837	0.273	34.353	0.107	0.327	98.910	3.932	30.815	99.304
01-JR-MA-029-026	0.166	0.330	0.009	12.508	52.642	0.217	9.847	0.275	22.724	0.104	0.097	98.919	4.024	19.103	99.322
01-JR-MA-032-009	0.097	0.694	0.000	31.453	35.798	0.148	17.340	0.149	13.175	0.192	0.073	99.119	2.591	10.844	99.379
01-JR-MA-033-008	0.050	0.277	0.000	4.803	44.277	0.163	0.710	0.944	45.248	0.044	0.784	97.300	16.910	30.033	98.994
01-JR-MA-033-009	0.081	0.441	0.000	11.663	49.731	0.209	1.622	0.550	34.857	0.087	0.161	99.402	3.883	31.363	99.791
01-JR-MA-033-010	0.130	0.378	0.000	13.012	52.773	0.234	10.157	0.274	22.387	0.099	0.081	99.525	3.838	18.934	99.909
01-JR-MA-033-011	0.157	0.261	0.000	12.047	53.744	0.181	9.844	0.250	21.690	0.124	0.054	98.352	3.271	18.747	98.680
01-JR-MA-033-012	0.355	0.357	0.034	11.995	51.592	0.222	10.099	0.255	22.042	0.119	0.082	97.152	4.057	18.392	97.558
01-JR-MA-033-013	0.147	0.333	0.000	12.890	52.605	0.142	10.712	0.242	20.654	0.121	0.073	97.919	3.614	17.402	98.281
01-JR-MA-033-014	0.148	0.336	0.000	11.902	51.096	0.181	8.208	0.275	25.362	0.116	0.125	97.749	4.810	21.034	98.231
01-JR-MA-033-015	0.154	0.364	0.038	12.968	51.610	0.197	10.235	0.189	22.793	0.116	0.083	98.747	4.620	18.636	99.210
01-JR-MA-033-016	0.071	0.735	0.014	11.027	50.419	0.283	9.326	0.301	25.372	0.107	0.128	97.783	6.378	19.633	98.422
01-JR-MA-033-017	0.057	0.326	0.066	12.074	53.165	0.239	10.201	0.257	21.920	0.091	0.072	98.468	3.974	18.344	98.866
01-JR-MA-033-019	0.136	0.318	0.000	12.770	52.755	0.170	10.065	0.233	21.909	0.102	0.076	98.534	3.663	18.613	98.901
01-JR-MA-033-020	0.067	0.475	0.044	12.019	49.466	0.229	8.811	0.299	26.217	0.110	0.108	97.845	6.550	20.323	98.501
01-JR-MA-036-006	0.080	2.096	0.045	12.175	44.467	0.421	8.342	0.287	29.394	0.122	0.154	97.583	7.405	22.730	98.325
01-JR-MA-040-011	0.079	0.359	0.000	12.248	52.047	0.208	10.442	0.240	22.942	0.089	0.093	98.747	5.422	18.063	99.290
01-JR-MA-040-013	0.098	0.357	0.000	14.608	48.755	0.232	10.966	0.223	23.036	0.146	0.074	98.495	6.040	17.602	99.100
01-JR-MA-040-014	0.120	0.300	0.003	12.237	52.389	0.160	9.727	0.271	22.507	0.089	0.098	97.901	4.169	18.756	98.319
01-JR-MA-052-002	0.111	0.344	0.005	12.467	52.342	0.217	9.785	0.578	22.907	0.129	0.102	98.987	4.537	18.824	99.442
01-JR-MA-055-004	0.090	0.317	0.077	11.403	49.360	0.194	2.818	0.305	33.089	0.129	0.239	98.021	4.387	29.142	98.461
01-JR-MA-056-003	0.092	0.399	0.031	12.135	52.347	0.261	9.466	0.320	23.751	0.109	0.100	99.011	4.538	19.668	99.466
01-JR-MA-058-009	0.062	0.391	0.000	12.195	51.727	0.251	10.303	0.241	22.148	0.081	0.060	97.459	4.663	17.952	97.926
01-JR-MA-058-010	0.147	3.983	0.000	16.672	35.090	0.158	11.552	0.180	30.131	0.272	0.117	98.302	11.096	20.147	99.414
01-JR-MA-058-011	0.144	0.324	0.000	12.452	53.133	0.173	10.902	0.252	20.289	0.128	0.075	97.872	3.606	17.045	98.233
01-JR-MA-058-012	0.326	0.307	0.035	12.468	50.767	0.193	7.420	0.314	26.351	0.097	0.105	98.383	3.974	22.775	98.781
01-JR-MA-059-007	0.080	0.956	0.011	12.355	51.002	0.307	11.152	0.258	21.646	0.120	0.078	97.965	4.720	17.399	98.438
01-JR-MA-059-008	0.124	0.326	0.058	12.151	53.119	0.183	11.467	0.215	20.331	0.133	0.073	98.180	4.450	16.327	98.626
01-JR-MA-064-019	0.153	0.336	0.000	12.923	52.684	0.198	10.633	0.280	21.664	0.124	0.070	99.065	4.112	17.964	99.477
01-JR-MA-073-009	0.058	0.271	0.000	5.933	47.497	0.102	0.563	1.516	40.650	0.061	1.072	97.723	12.340	29.547	98.959
01-JR-MA-073-011	0.043	0.363	0.000	12.537	51.382	0.191	9.730	0.265	24.114	0.086	0.078	98.789	5.533	19.136	99.343
01-JR-MA-073-013	0.112	0.514	0.000	27.443	38.655	0.163	14.671	0.171	17.564	0.189	0.076	99.558	3.611	14.314	99.920

Sample	SiO_2	TiO_2	Nb_2O_5	Al_2O_3	Cr_2O_3	V_2O_5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe_2O_3	FeO	Total
01-JR-MA-073-015	0.078	0.396	0.015	13.406	52.117	0.198	10.463	0.348	20.781	0.074	0.223	98.099	3.327	17.787	98.432
01-JR-MA-073-016	0.075	0.369	0.019	12.207	52.772	0.227	8.806	0.309	24.256	0.118	0.079	99.237	3.995	20.661	99.637
01-JR-MA-073-017	0.110	1.484	0.000	23.700	40.164	0.001	14.478	0.261	18.856	0.184	0.071	99.309	4.844	14.498	99.794
01-JR-MA-073-018	0.114	0.585	0.000	11.674	49.971	0.214	6.784	0.320	28.595	0.092	0.196	98.545	5.562	23.590	99.102
01-JR-MA-073-019	0.104	0.336	0.015	12.345	51.239	0.220	6.750	0.295	27.361	0.107	0.149	98.921	4.086	23.685	99.330
01-JR-MA-073-022	0.089	4.431	0.042	15.632	37.427	0.425	2.060	0.470	37.393	0.041	0.080	98.090	2.598	35.055	98.350
01-JR-MA-073-023	0.081	1.612	0.000	13.924	48.227	0.323	8.848	0.351	25.419	0.170	0.152	99.107	3.886	21.922	99.496
01-JR-MA-073-024	0.074	0.451	0.012	6.619	49.305	0.146	6.237	0.818	33.509	0.095	0.544	97.810	12.329	22.415	99.045
01-JR-MA-073-025	0.169	0.283	0.000	12.571	56.512	0.140	14.339	0.152	15.271	0.176	0.023	99.636	3.183	12.407	99.955
01-JR-MA-073-027	0.187	1.096	0.025	30.139	33.694	0.141	16.428	0.128	16.986	0.250	0.063	99.137	4.937	12.544	99.632
01-JR-MA-073-028	0.191	0.258	0.000	12.658	55.940	0.143	13.626	0.192	15.796	0.180	0.024	99.008	2.807	13.270	99.289
01-JR-MA-073-030	0.087	0.431	0.000	14.852	52.043	0.150	10.055	0.343	21.042	0.111	0.075	99.189	2.235	19.031	99.413
01-JR-MA-073-031	0.111	0.321	0.000	16.544	47.846	0.198	6.607	0.405	26.609	0.056	0.476	99.173	2.669	24.207	99.440
01-JR-MA-073-032	0.077	0.353	0.000	12.264	51.787	0.254	9.780	0.265	23.734	0.113	0.086	98.713	5.166	19.085	99.231
01-JR-MA-073-033	0.127	0.279	0.000	11.540	51.368	0.195	5.788	0.370	28.670	0.111	0.131	98.579	4.315	24.787	99.011
01-JR-MA-073-034	0.095	0.299	0.023	12.072	53.218	0.148	9.536	0.237	22.928	0.106	0.091	98.753	4.049	19.285	99.159
01-JR-MA-073-035	0.090	0.364	0.000	11.471	53.059	0.201	9.523	0.314	24.072	0.098	0.091	99.283	5.147	19.441	99.799
01-JR-MA-073-036	0.254	0.060	0.006	15.998	51.958	0.080	16.558	0.092	13.502	0.182	0.028	98.718	4.831	9.155	99.202
01-JR-MA-073-037	0.084	1.742	0.000	11.255	48.823	0.339	9.282	0.288	27.040	0.158	0.105	99.116	6.548	21.148	99.772
01-JR-MA-073-038	0.128	0.315	0.000	12.882	52.943	0.160	9.384	0.243	23.085	0.103	0.100	99.343	3.574	19.869	99.701
01-JR-MA-073-039	0.128	0.184	0.000	12.990	51.846	0.087	12.324	0.182	21.216	0.144	0.048	99.149	6.672	15.213	99.817
01-JR-MA-073-040	0.116	0.128	0.010	7.126	52.882	0.050	0.544	2.093	34.312	0.005	1.646	98.912	6.059	28.860	99.519
01-JR-MA-073-042	0.105	0.568	0.000	12.139	51.392	0.324	9.028	0.276	25.241	0.069	0.086	99.228	4.991	20.750	99.728
01-JR-MA-073-044	0.097	0.303	0.000	11.374	50.428	0.160	2.775	0.371	33.430	0.099	0.236	99.273	4.434	29.440	99.717
01-JR-MA-073-045	0.081	0.508	0.000	13.396	50.722	0.254	9.980	0.291	23.650	0.139	0.083	99.104	4.973	19.176	99.602
01-JR-MA-073-074	0.107	0.422	0.000	8.417	59.924	0.096	13.540	0.175	15.825	0.154	0.041	98.701	3.541	12.639	99.056
01-JR-MA-073-076	0.142	0.372	0.019	13.813	51.986	0.222	11.992	0.177	19.566	0.149	0.050	98.488	3.955	16.007	98.884
01-JR-MA-073-077	0.116	0.277	0.010	11.657	51.696	0.124	5.033	0.352	29.267	0.109	0.143	98.784	3.732	25.909	99.158
01-JR-MA-074-016	0.207	0.292	0.035	13.345	53.766	0.133	11.573	0.231	19.219	0.168	0.044	99.013	2.967	16.549	99.310
01-JR-MA-074-017	0.120	0.383	0.000	12.178	52.569	0.172	10.243	0.279	23.346	0.111	0.099	99.500	5.331	18.549	100.034
01-JR-MA-074-018	0.171	0.339	0.000	14.452	51.047	0.179	10.109	0.248	22.273	0.110	0.074	99.002	3.618	19.018	99.364
01-JR-MA-074-019	0.158	0.448	0.000	26.004	35.007	0.315	13.190	0.180	22.605	0.139	0.027	98.073	7.054	16.258	98.780
01-JR-MA-074-020	0.121	0.381	0.000	11.828	50.901	0.219	9.498	0.289	24.160	0.093	0.056	97.546	5.588	19.132	98.106
01-JR-MA-074-021	0.146	0.236	0.009	12.001	49.781	0.095	1.445	1.521	31.741	0.012	1.325	98.312	2.962	29.076	98.609
01-JR-MA-074-023	0.137	0.362	0.046	13.127	51.954	0.180	11.116	0.249	20.338	0.160	0.055	97.724	3.875	16.851	98.112
01-JR-MA-074-024	0.082	0.298	0.000	10.603	47.888	0.059	1.880	0.981	35.676	0.077	0.462	98.006	7.038	29.343	98.711
01-JR-MA-074-025	0.091	0.843	0.000	12.188	51.970	0.384	11.187	0.249	20.988	0.104	0.088	98.092	4.004	17.385	98.493
01-JR-MA-074-026	0.108	0.433	0.026	15.396	38.464	0.361	2.034	0.443	40.641	0.106	0.166	98.178	10.260	31.409	99.206
01-JR-MA-074-027	0.068	0.370	0.067	6.708	48.904	0.159	4.855	0.401	36.003	0.086	0.219	97.840	11.929	25.269	99.035
01-JR-MA-074-029	0.084	0.166	0.027	9.277	51.912	0.142	5.420	0.280	30.616	0.046	0.401	98.371	6.623	24.657	99.035
01-JR-MA-074-030	0.064	0.486	0.019	4.402	48.436	0.103	4.093	0.416	38.651	0.097	0.222	96.989	14.308	25.776	98.423
01-JR-MA-075-020	0.096	0.328	0.017	12.147	53.427	0.202	10.779	0.230	20.617	0.122	0.084	98.049	3.724	17.266	98.422
01-JR-MA-075-021	0.078	0.471	0.033	14.381	47.310	0.351	6.141	0.374	29.358	0.121	0.262	98.880	4.790	25.048	99.360
01-JR-MA-075-022	0.085	0.676	0.000	13.592	50.180	0.219	9.594	0.307	23.894	0.126	0.152	98.825	4.620	19.737	99.288
01-JR-MA-075-023	0.106	1.077	0.048	11.194	49.670	0.273	8.120	0.336	27.847	0.099	0.108	98.878	6.258	22.216	99.505
01-JR-MA-075-024	0.071	0.419	0.009	5.789	44.842	0.075	1.201	0.571	43.538	0.060	0.642	97.217	15.158	29.899	98.736

Sample	SiO2	TiO2	Nb2O5	Al2O3	Cr2O3	V2O5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe2O3	FeO	Total
01-JR-MA-075-025	0.159	0.358	0.009	14.649	50.807	0.229	10.937	0.248	20.590	0.123	0.054	98.163	3.322	17.600	98.496
01-JR-MA-075-026	0.097	0.326	0.019	11.910	53.836	0.180	10.701	0.222	21.447	0.106	0.055	98.899	4.223	17.647	99.322
01-JR-MA-082-002	0.096	0.279	0.000	12.055	53.939	0.106	10.576	0.216	21.061	0.100	0.097	98.525	3.922	17.532	98.918
01-JR-MA-088-014	0.120	0.410	0.000	12.124	52.023	0.221	9.768	0.234	23.060	0.073	0.076	98.109	4.499	19.012	98.560
01-JR-MA-097-012	0.106	0.370	0.000	13.722	52.852	0.180	12.147	0.239	18.760	0.152	0.066	98.594	3.545	15.570	98.949
01-JR-MA-097-013	0.085	0.419	0.040	11.767	50.915	0.213	9.027	0.274	25.704	0.089	0.099	98.632	6.121	20.197	99.245
01-JR-MA-097-014	0.338	0.417	0.016	11.254	58.382	0.149	15.566	0.160	12.719	0.145	0.046	99.192	2.425	10.537	99.435
01-JR-MA-097-015	0.637	0.709	0.000	10.796	50.295	0.273	8.592	0.287	26.680	0.105	0.125	98.499	5.601	21.641	99.060
01-JR-MA-097-016	0.069	0.854	0.000	10.955	50.216	0.260	8.943	0.306	26.577	0.125	0.114	98.419	6.793	20.464	99.100
01-JR-MA-097-017	0.165	0.354	0.000	11.566	54.165	0.193	11.468	0.215	20.346	0.100	0.037	98.609	4.306	16.472	99.040
01-JR-MA-097-018	0.120	0.363	0.016	12.328	53.391	0.242	10.184	0.262	22.082	0.097	0.117	99.202	3.800	18.663	99.583
01-JR-MA-097-019	0.137	0.300	0.045	12.740	53.796	0.148	10.831	0.247	20.659	0.108	0.061	99.072	3.409	17.592	99.414
01-JR-MA-097-020	0.088	0.538	0.040	11.897	51.556	0.241	10.384	0.296	23.592	0.100	0.097	98.829	5.857	18.322	99.416
01-JR-MA-097-021	0.070	0.579	0.031	11.685	51.070	0.282	9.608	0.130	25.126	0.107	0.081	98.769	6.026	19.704	99.373
01-JR-MA-097-022	0.121	0.299	0.047	12.050	53.685	0.178	11.460	0.187	20.597	0.128	0.055	98.807	4.523	16.527	99.260
01-JR-MA-097-023	1.163	0.416	0.040	11.691	52.962	0.246	10.899	0.226	20.310	0.103	0.096	98.152	1.917	18.585	98.344
01-JR-MA-097-024	0.142	0.370	0.000	12.919	53.001	0.161	12.452	0.213	19.340	0.162	0.053	98.813	4.699	15.112	99.284
01-JR-MA-097-025	0.120	0.385	0.000	12.752	49.423	0.168	7.481	0.329	27.563	0.065	0.165	98.451	5.664	22.467	99.018
01-JR-MA-097-026	0.142	0.299	0.000	13.198	53.699	0.171	11.573	0.248	19.226	0.121	0.074	98.751	3.148	16.393	99.066
01-JR-MA-097-027	0.123	0.353	0.000	13.080	52.594	0.213	11.188	0.197	20.945	0.117	0.086	98.896	4.205	17.162	99.317
01-JR-MA-097-028	0.059	0.560	0.000	11.315	51.259	0.242	9.774	0.282	24.711	0.115	0.096	98.413	6.364	18.984	99.051
01-JR-MA-097-029	0.164	0.314	0.000	12.044	53.995	0.082	10.693	0.222	21.480	0.143	0.064	99.201	4.268	17.639	99.629
01-JR-MA-097-030	0.078	0.697	0.000	13.119	50.154	0.222	8.763	0.379	25.471	0.113	0.209	99.205	5.007	20.965	99.707
01-JR-MA-097-031	0.074	0.237	0.000	4.441	45.940	0.130	0.551	1.991	42.903	0.056	1.346	97.669	15.809	28.678	99.253
01-JR-MA-097-032	0.075	0.750	0.048	12.673	51.437	0.319	9.946	0.262	23.635	0.118	0.094	99.357	4.502	19.584	99.808
01-JR-MA-097-033	0.089	0.584	0.003	12.576	50.395	0.273	10.025	0.282	25.127	0.104	0.093	99.551	6.485	19.292	100.201
01-JR-MA-097-035	0.104	0.412	0.050	12.128	51.528	0.257	8.750	0.279	25.376	0.091	0.110	99.085	4.993	20.884	99.585
01-JR-MA-097-036	0.064	0.366	0.000	12.341	52.124	0.224	9.851	0.230	23.794	0.081	0.088	99.163	5.166	19.146	99.681
01-JR-MA-097-037	0.147	0.323	0.000	12.653	53.688	0.177	11.374	0.240	20.602	0.125	0.056	99.385	4.126	16.890	99.798
01-JR-MA-097-038	0.095	0.957	0.000	11.712	50.897	0.253	9.061	0.252	25.662	0.117	0.102	99.108	5.414	20.790	99.650
01-JR-MA-097-039	0.186	0.458	0.002	11.536	52.005	0.208	9.596	0.270	25.246	0.097	0.114	99.718	6.117	19.742	100.331
01-JR-MA-097-040	0.080	0.382	0.013	11.689	52.210	0.185	9.612	0.295	24.259	0.090	0.090	98.905	5.574	19.244	99.463
01-JR-MA-097-041	0.113	0.403	0.104	12.657	52.577	0.266	10.815	0.240	21.726	0.115	0.070	99.086	4.235	17.916	99.510
01-JR-MA-097-042	0.139	0.341	0.016	13.022	52.757	0.187	10.288	0.260	22.130	0.088	0.076	99.304	3.906	18.615	99.695
01-JR-MA-097-043	0.108	0.351	0.039	11.899	52.964	0.248	10.542	0.219	22.817	0.119	0.078	99.384	5.141	18.191	99.899
01-JR-MA-097-044	0.109	0.431	0.000	12.212	50.890	0.232	9.930	0.260	24.655	0.078	0.104	98.901	6.256	19.026	99.528
01-JR-MA-097-045	0.188	0.313	0.000	13.371	51.857	0.210	10.393	0.245	23.089	0.107	0.075	99.848	4.816	18.756	100.330
01-JR-MA-097-046	0.089	1.992	0.023	10.847	48.576	0.362	7.220	0.394	29.954	0.154	0.117	99.728	5.947	24.603	100.324
01-JR-MA-097-047	0.160	0.319	0.054	11.829	56.592	0.091	13.282	0.161	16.597	0.192	0.041	99.318	3.152	13.761	99.634
01-JR-MA-097-056	0.095	1.250	0.000	9.284	55.084	0.259	11.825	0.254	21.034	0.138	0.095	99.318	5.046	16.494	99.824
01-JR-MA-098-006	0.134	0.343	0.048	12.479	53.919	0.221	11.387	0.217	20.923	0.132	0.076	99.879	4.230	17.117	100.303
01-JR-MA-098-008	0.134	0.321	0.000	12.572	53.517	0.185	11.317	0.234	20.690	0.121	0.056	99.147	4.220	16.893	99.570
01-JR-MA-098-009	0.154	0.364	0.020	13.059	51.610	0.222	9.124	0.269	24.276	0.105	0.084	99.287	4.231	20.469	99.711
01-JR-MA-098-010	0.081	0.740	0.000	11.234	51.019	0.269	9.562	0.247	26.136	0.127	0.144	99.559	6.946	19.886	100.255
01-JR-MA-098-011	0.090	0.332	0.039	11.851	52.951	0.222	9.559	0.263	23.899	0.108	0.105	99.419	4.828	19.555	99.903
01-JR-MA-098-012	0.146	0.367	0.069	9.260	51.800	0.108	1.113	1.348	34.568	0.113	0.748	99.640	4.622	30.409	100.103

Sample	SiO2	TiO2	Nb2O5	Al2O3	Cr2O3	V2O5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe2O3	FeO	Total
01-JR-MA-098-013	0.195	0.323	0.031	11.942	51.179	0.074	4.545	0.262	30.889	0.070	0.137	99.647	4.094	27.205	100.057
01-JR-MA-098-014	0.161	0.374	0.002	13.288	53.469	0.231	10.488	0.258	21.494	0.066	0.084	99.915	3.145	18.664	100.230
01-JR-MA-098-015	0.161	0.345	0.041	12.600	54.385	0.205	11.839	0.244	19.736	0.129	0.037	99.722	3.706	16.401	100.093
01-JR-MA-098-016	0.068	0.428	0.000	11.205	53.505	0.258	10.389	0.258	22.947	0.131	0.100	99.289	5.263	18.211	99.816
01-JR-MA-098-017	0.103	0.401	0.009	12.756	[illegible]2.426	0.200	9.500	0.284	23.625	0.104	0.107	99.515	4.245	19.805	99.940
01-JR-MA-098-018	0.108	0.312	0.000	12.299	53.145	0.209	9.355	0.285	23.937	0.082	0.066	99.798	4.334	20.038	100.232
01-JR-MA-098-019	0.113	1.422	0.023	27.101	36.420	0.164	15.686	0.146	18.389	0.202	0.070	99.736	5.265	13.652	100.263
01-JR-MA-100-018	0.086	0.400	0.003	16.505	46.467	0.327	11.221	0.277	23.770	0.141	0.099	99.296	6.549	17.877	99.952
01-JR-MA-100-019	0.221	0.175	0.046	11.352	55.024	0.026	15.653	0.188	16.320	0.117	0.037	99.159	7.068	9.960	99.867
01-JR-MA-100-020	0.079	0.459	0.000	5.872	49.632	0.105	5.724	0.691	34.513	0.097	0.659	97.831	12.734	23.055	99.107
01-JR-MA-102-009	0.109	0.478	0.037	14.321	51.537	0.221	10.457	0.278	21.637	0.083	0.092	99.250	3.305	18.663	99.581
01-JR-MA-102-010	0.088	0.468	0.000	11.688	52.170	0.293	9.944	0.247	24.337	0.100	0.103	99.438	5.732	19.179	100.012
01-JR-MA-102-012	0.071	0.494	0.028	12.510	52.364	0.215	11.176	0.244	22.292	0.112	0.079	99.585	5.453	17.385	100.131
01-JR-MA-111-010	0.128	0.329	0.016	12.396	53.361	0.151	11.113	0.216	21.037	0.118	0.065	98.930	4.391	17.086	99.370
01-JR-MA-111-022	0.068	0.297	0.000	15.348	54.895	0.212	13.348	0.205	14.737	0.068	0.121	99.299	0.635	14.166	99.363
01-JR-MA-111-023	0.104	0.068	0.000	17.770	49.324	0.215	8.381	0.712	22.067	0.101	0.173	98.915	0.867	21.287	99.002
01-JR-MA-111-024	0.196	0.303	0.026	11.868	52.583	0.160	9.561	0.246	23.659	0.082	0.123	98.807	4.750	19.385	99.283
01-JR-MA-112-004	0.057	0.438	0.000	12.064	50.704	0.269	7.975	0.296	26.396	0.110	0.070	98.379	5.141	21.770	98.894
01-JR-MA-123-034	0.172	0.336	0.000	14.358	51.393	0.178	11.054	0.230	20.912	0.163	0.042	98.838	3.793	17.499	99.218
01-JR-MA-123-035	0.093	0.468	0.017	13.249	50.752	0.258	10.965	0.242	21.947	0.121	0.121	98.233	5.053	17.400	98.739
01-JR-MA-123-036	0.094	0.742	0.048	13.991	49.264	0.221	6.914	0.394	27.055	0.124	0.230	99.077	3.475	23.928	99.425
01-JR-MA-123-038	0.067	0.644	0.025	16.859	50.964	0.301	11.502	0.223	19.104	0.086	0.254	100.029	1.456	17.794	100.175
01-JR-MA-123-039	0.088	0.256	0.000	8.905	50.769	0.078	0.444	2.492	33.322	0.013	2.817	99.184	5.911	28.003	99.776
01-JR-MA-123-040	0.090	1.260	0.044	12.993	46.664	0.308	5.864	0.453	31.117	0.122	0.206	99.121	5.702	25.987	99.692
01-JR-MA-123-041	0.084	0.787	0.000	13.225	49.492	0.311	10.462	0.325	24.717	0.118	0.103	99.624	6.449	18.914	100.270
01-JR-MA-123-042	0.094	0.572	0.000	13.773	50.543	0.127	7.356	0.355	26.478	0.102	0.123	99.523	3.669	23.177	99.891
01-JR-MA-123-043	0.112	0.324	0.000	12.927	56.445	0.129	13.011	0.219	16.234	0.101	0.074	99.576	2.080	14.362	99.784
01-JR-MA-123-045	0.186	1.018	0.016	27.455	37.261	0.191	16.212	0.132	16.930	0.238	0.048	99.687	4.763	12.644	100.164
01-JR-MA-123-047	0.106	0.694	0.011	13.224	48.022	0.204	10.268	0.398	26.002	0.140	0.080	99.149	8.005	18.799	99.951
01-JR-MA-123-050	0.224	0.274	0.005	14.232	54.742	0.116	14.086	0.167	15.569	0.229	0.022	99.666	2.827	13.025	99.949
01-JR-MA-123-051	0.097	0.768	0.000	15.007	47.813	0.300	11.044	0.237	23.961	0.149	0.111	99.487	6.301	18.291	100.118
01-JR-MA-123-052	0.091	0.648	0.019	15.330	50.614	0.238	10.840	0.266	21.451	0.127	0.067	99.691	3.271	18.508	100.019
01-JR-MA-123-053	0.185	0.338	0.000	13.115	53.201	0.138	12.337	0.305	19.860	0.151	0.056	99.686	4.836	15.508	100.171
01-JR-MA-123-054	0.099	0.549	0.010	13.203	52.382	0.249	11.402	0.259	21.404	0.100	0.068	99.725	4.553	17.307	100.181
01-JR-MA-123-055	0.129	1.165	0.052	8.029	52.133	0.252	7.529	0.312	29.574	0.116	0.107	99.398	7.420	22.897	100.141
01-JR-MA-123-057	0.204	1.463	0.001	23.764	40.089	0.136	15.702	0.133	17.906	0.224	0.049	99.671	5.250	13.182	100.197
01-JR-MA-123-058	0.019	0.542	0.000	7.337	50.471	0.139	6.380	0.394	33.713	0.107	0.139	99.241	11.318	23.529	100.375
01-JR-MA-123-059	0.079	1.135	0.000	13.038	47.297	0.262	6.586	0.414	30.268	0.106	0.121	99.306	6.026	24.845	99.910
01-JR-MA-123-087	0.117	0.392	0.000	14.252	52.778	0.214	12.596	0.216	18.266	0.124	0.056	99.011	3.359	15.244	99.347
01-JR-MA-123-093	0.127	0.707	0.041	14.456	51.469	0.273	11.945	0.235	19.472	0.130	0.070	98.925	3.156	16.632	99.241
01-JR-MA-126-012	0.114	0.303	0.000	11.812	51.895	0.184	2.267	2.422	28.653	0.036	1.901	99.587	1.985	26.867	99.786
01-JR-MA-126-013	0.045	0.224	0.014	3.508	46.123	0.075	1.500	1.661	43.321	0.107	0.927	97.505	17.471	27.600	99.255
01-JR-MA-126-014	0.136	0.354	0.034	13.070	51.414	0.186	8.835	0.251	25.052	0.100	0.094	99.526	4.576	20.934	99.985
01-JR-MA-126-015	0.179	0.345	0.011	12.696	53.259	0.164	10.440	0.245	22.036	0.086	0.058	99.519	3.985	18.450	99.918
01-JR-MA-126-016	0.162	0.304	0.013	11.682	53.737	0.141	10.248	0.234	22.764	0.108	0.105	99.498	4.800	18.445	99.979
01-JR-MA-126-017	0.048	1.244	0.013	11.395	50.756	0.327	9.916	0.284	25.069	0.111	0.115	99.278	5.878	19.780	99.867

Sample	SiO_2	TiO_2	Nb_2O_5	Al_2O_3	Cr_2O_3	V_2O_5	MgO	MnO	FeO^*	NiO	ZnO	Total	Fe_2O_3	FeO	Total
01-JR-MA-126-018	0.082	1.632	0.011	13.679	49.133	0.267	11.332	0.243	22.869	0.163	0.089	99.500	5.031	18.342	100.004
01-JR-MA-126-019	0.071	1.050	0.002	13.039	47.837	0.319	6.061	0.416	30.018	0.126	0.177	99.116	5.019	25.502	99.619
01-JR-MA-126-020	0.088	0.419	0.023	12.332	52.287	0.256	10.466	0.257	23.746	0.095	0.088	100.057	5.709	18.609	100.629
01-JR-MA-126-021	0.079	0.334	0.031	5.541	49.365	0.106	2.605	2.102	36.644	0.091	1.359	98.257	12.094	25.761	99.469
01-JR-MA-126-022	0.141	0.300	0.000	12.635	54.147	0.160	11.661	0.241	19.636	0.116	0.064	99.101	3.713	16.295	99.473
01-JR-MA-126-024	0.071	0.857	0.019	12.829	51.410	0.185	10.444	0.238	22.945	0.118	0.103	99.219	4.744	18.677	99.694
01-JR-MA-126-025	0.155	0.301	0.000	11.972	54.011	0.160	10.030	0.225	22.874	0.143	0.076	99.947	4.342	18.967	100.382
01-JR-MA-126-026	0.705	0.319	0.012	11.909	52.280	0.181	8.343	0.354	25.620	0.124	0.139	99.986	3.854	22.152	100.372
01-JR-MA-126-030	0.111	0.455	0.035	12.757	51.121	0.269	10.340	0.209	23.666	0.082	0.086	99.131	5.491	18.725	99.681
01-JR-MA-126-031	0.090	0.276	0.001	13.382	51.174	0.197	6.397	0.422	27.071	0.044	0.528	99.582	3.356	24.051	99.918
01-JR-MA-126-032	0.174	0.658	0.000	12.057	51.759	0.302	9.949	0.247	24.285	0.127	0.120	99.678	5.258	19.554	100.205
01-JR-MA-126-033	0.123	0.354	0.000	13.657	54.826	0.171	11.275	0.241	18.832	0.069	0.096	99.644	1.761	17.247	99.820
01-JR-MA-126-034	0.128	0.408	0.000	14.127	50.919	0.200	9.070	0.270	24.263	0.118	0.115	99.618	3.925	20.731	100.011
01-JR-MA-126-035	0.062	0.726	0.009	11.741	48.176	0.293	2.862	0.297	34.976	0.117	0.153	99.412	5.407	30.110	99.954
01-JR-MA-126-039	0.109	0.432	0.000	13.112	52.215	0.178	11.433	0.177	20.805	0.129	0.077	98.667	4.519	16.739	99.120
01-JR-MA-126-040	0.240	0.301	0.000	11.584	52.521	0.194	7.529	0.270	26.327	0.126	0.059	99.151	4.112	22.627	99.563
01-JR-MA-132-010	0.094	0.304	0.000	12.062	52.678	0.176	9.350	0.272	24.453	0.085	0.109	99.583	5.120	19.846	100.096
01-JR-MA-132-011	0.086	0.889	0.003	14.511	50.073	0.259	12.198	0.185	21.469	0.146	0.058	99.877	5.308	16.693	100.409
01-JR-MA-132-012	0.099	0.375	0.000	12.839	50.616	0.203	8.963	0.303	26.082	0.076	0.123	99.679	6.000	20.683	100.280
01-JR-MA-132-013	0.186	0.254	0.000	11.947	55.606	0.143	11.314	0.228	19.948	0.131	0.095	99.852	3.372	16.914	100.190
01-JR-MA-132-014	0.084	0.496	0.017	14.540	53.322	0.173	11.989	0.238	19.327	0.085	0.085	100.356	2.990	16.637	100.656
01-JR-MA-132-015	0.116	0.247	0.000	14.375	43.354	0.157	0.519	0.734	38.651	0.019	1.295	99.467	7.189	32.183	100.187
01-JR-MA-132-016	0.143	0.362	0.000	10.888	56.132	0.115	11.769	0.233	19.873	0.147	0.033	99.695	4.250	16.049	100.121
01-JR-MA-132-017	0.081	1.000	0.038	17.057	48.639	0.226	13.417	0.169	18.986	0.137	0.083	99.833	4.128	15.272	100.247
01-JR-MA-132-018	0.075	0.555	0.000	11.734	51.587	0.216	9.562	0.256	25.096	0.103	0.105	99.289	6.045	19.656	99.895
01-JR-MA-132-019	0.074	0.322	0.029	11.603	53.063	0.194	9.770	0.289	23.918	0.092	0.092	99.446	5.324	19.128	99.979
01-JR-MA-132-020	0.167	0.313	0.026	12.639	53.392	0.126	9.691	0.275	22.752	0.111	0.064	99.556	3.675	19.445	99.924
01-JR-MA-132-021	0.164	0.311	0.000	12.397	55.851	0.125	13.963	0.189	16.700	0.169	0.035	99.904	4.101	13.010	100.315
01-JR-MA-132-022	0.112	0.394	0.006	14.845	48.752	0.242	9.192	0.227	25.363	0.157	0.086	99.376	5.214	20.671	99.898
01-JR-MA-132-023	0.159	0.361	0.055	13.361	52.490	0.171	10.572	0.249	22.233	0.112	0.076	99.839	4.199	18.455	100.260
01-JR-MA-132-024	0.147	0.399	0.020	12.536	51.801	0.212	9.697	0.262	24.628	0.085	0.087	99.874	5.423	19.748	100.417
01-JR-MA-132-025	0.081	0.351	0.013	12.248	53.234	0.173	10.008	0.279	22.802	0.090	0.105	99.384	4.428	18.817	99.828
01-JR-MA-132-026	0.107	0.326	0.023	12.018	51.850	0.216	8.082	0.296	26.000	0.113	0.146	99.177	4.801	21.680	99.658
01-JR-MA-132-027	0.081	0.796	0.000	12.764	50.870	0.248	8.585	0.325	25.155	0.107	0.111	99.042	4.174	21.400	99.460
01-JR-MA-132-028	0.147	0.325	0.000	12.621	53.371	0.187	10.959	0.243	21.495	0.117	0.083	99.548	4.358	17.574	99.985
01-JR-MA-132-029	0.075	1.339	0.081	11.190	46.523	0.390	8.848	0.296	30.074	0.120	0.107	99.043	9.377	21.637	99.982
01-JR-MA-132-030	0.046	0.743	0.059	11.536	50.705	0.301	9.851	0.284	25.779	0.107	0.097	99.508	6.908	19.563	100.200
01-JR-MA-134-009	0.107	0.321	0.047	12.915	52.628	0.238	11.189	0.259	21.689	0.138	0.128	99.659	4.874	17.303	100.147
01-JR-MA-134-010	0.162	0.259	0.006	13.130	54.513	0.141	10.801	0.213	20.441	0.194	0.049	99.909	2.860	17.867	100.196
01-JR-MA-134-011	0.150	0.341	0.000	13.012	54.843	0.163	10.890	0.263	19.480	0.120	0.139	99.401	2.131	17.563	99.614
01-JR-MA-134-012	0.079	0.121	0.046	6.690	48.273	0.200	2.200	0.783	39.816	0.072	0.258	98.538	12.039	28.983	99.744
01-JR-MA-134-013	0.069	0.339	0.020	4.421	48.087	0.093	3.673	1.315	39.061	0.134	0.721	97.933	15.403	25.201	99.476
01-JR-MA-134-014	0.115	0.119	0.021	4.084	52.636	0.126	0.679	1.971	35.870	0.006	2.684	98.311	9.497	27.324	99.263
01-JR-MA-134-015	0.226	1.451	0.045	12.571	49.594	0.278	9.928	0.316	24.963	0.160	0.108	99.640	5.127	20.350	100.154
01-JR-MA-134-016	0.151	0.425	0.000	13.075	52.633	0.156	10.849	0.242	22.003	0.099	0.069	99.702	4.511	17.944	100.154
01-JR-MA-134-017	0.064	1.191	0.000	12.262	48.566	0.323	9.307	0.262	27.053	0.093	0.101	99.222	6.888	20.855	99.912

Sample	SiO_2	TiO_2	Nb_2O_5	Al_2O_3	Cr_2O_3	V_2O_5	MgO	MnO	FeO^*	NiO	ZnO	Total	Fe_2O_3	FeO	Total
01-JR-MA-134-018	0.167	0.304	0.013	13.737	54.569	0.162	12.665	0.179	17.515	0.171	0.053	99.535	2.656	15.125	99.801
01-JR-MA-134-019	0.097	0.561	0.000	13.065	48.808	0.254	8.981	0.305	27.041	0.073	0.084	99.269	6.874	20.856	99.958
01-JR-MA-134-020	0.105	0.430	0.000	12.790	46.576	0.202	1.341	0.348	36.492	0.086	0.586	98.956	5.352	31.677	99.492
01-JR-MA-134-021	0.077	1.019	0.017	14.369	49.960	0.281	11.221	0.237	22.107	0.130	0.090	99.508	4.431	18.120	99.952
01-JR-MA-134-022	0.091	1.239	0.007	13.574	46.759	0.273	5.814	0.408	30.715	0.121	0.249	99.250	5.145	26.086	99.765
01-JR-MA-134-023	0.100	0.318	0.010	11.738	54.695	0.224	11.428	0.240	20.777	0.125	0.075	99.730	4.444	16.778	100.175
01-JR-MA-134-024	0.146	0.381	0.031	13.041	53.863	0.255	11.361	0.228	20.229	0.101	0.107	99.743	3.297	17.263	100.073
01-JR-MA-134-025	0.058	0.873	0.000	15.246	50.645	0.219	10.791	0.237	21.469	0.123	0.088	99.749	3.066	18.710	100.056
01-JR-MA-134-026	0.163	0.334	0.020	13.122	53.996	0.119	12.767	0.140	18.470	0.207	0.040	99.378	4.053	14.823	99.784
01-JR-MA-134-027	0.124	3.003	0.016	19.171	39.924	0.247	13.320	0.201	23.521	0.198	0.088	99.813	6.621	17.563	100.476
01-JR-MA-134-029	0.056	0.533	0.037	7.305	47.184	0.121	4.664	0.399	37.783	0.101	0.234	98.417	13.229	25.879	99.742
01-JR-MA-134-030	0.085	1.056	0.027	13.341	48.390	0.259	6.121	0.401	29.324	0.116	0.244	99.364	4.313	25.443	99.796
01-JR-MA-134-031	0.113	0.460	0.067	9.245	49.049	0.058	0.390	2.216	33.732	0.108	3.389	98.827	6.434	27.942	99.472
01-JR-MA-134-032	0.086	0.764	0.017	12.435	52.162	0.243	10.863	0.235	22.403	0.126	0.079	99.413	4.807	18.078	99.895
01-JR-MA-134-033	0.060	0.357	0.010	5.744	49.155	0.089	5.072	0.356	36.707	0.076	0.232	97.858	13.375	24.672	99.198
01-JR-MA-134-034	0.049	0.406	0.032	6.419	50.138	0.093	5.070	0.391	35.756	0.093	0.182	98.629	11.892	25.056	99.820
01-JR-MA-134-035	0.071	0.808	0.000	13.285	51.671	0.255	9.585	0.298	23.736	0.111	0.093	99.913	3.848	20.273	100.299
01-JR-MA-134-036	0.103	1.062	0.000	13.079	49.463	0.249	6.734	0.384	28.068	0.115	0.245	99.502	3.958	24.506	99.899
01-JR-MA-134-037	0.128	0.353	0.011	14.519	55.991	0.151	12.976	0.206	15.386	0.081	0.087	99.889	0.590	14.855	99.948
01-JR-MA-134-038	0.091	1.842	0.027	10.592	48.878	0.297	8.031	0.302	29.290	0.105	0.137	99.592	6.786	23.184	100.272
01-JR-MA-134-039	0.103	0.286	0.000	14.579	56.834	0.099	12.957	0.252	14.708	0.064	0.071	99.953	0.004	14.705	99.953
01-JR-MA-134-040	0.084	0.796	0.000	11.531	50.917	0.247	9.474	0.218	26.116	0.076	0.102	99.561	6.575	20.200	100.220
01-JR-MA-134-041	0.085	0.469	0.000	12.188	52.127	0.216	10.658	0.258	23.424	0.097	0.094	99.616	5.914	18.102	100.209
01-JR-MA-134-043	0.161	0.289	0.078	13.122	54.876	0.086	12.392	0.237	18.261	0.156	0.060	99.718	3.194	15.387	100.038
01-JR-MA-134-044	0.075	0.695	0.000	13.020	50.845	0.233	6.623	0.387	27.346	0.113	0.200	99.537	3.367	24.317	99.874
01-JR-MA-134-045	0.104	0.396	0.000	15.159	48.312	0.228	10.970	0.223	24.162	0.100	0.096	99.750	6.674	18.157	100.419
01-JR-MA-134-059	0.066	0.257	0.015	6.297	48.661	0.085	4.815	0.367	37.138	0.092	0.241	98.034	13.388	25.091	99.375
01-JR-MA-134-060	0.156	0.323	0.020	12.568	53.755	0.187	11.163	0.250	20.408	0.122	0.057	99.009	3.666	17.110	99.376
01-JR-MA-135-055	0.077	0.326	0.000	6.196	50.689	0.084	2.615	1.645	36.259	0.059	0.925	98.875	10.470	26.838	99.924
01-JR-MA-135-056	0.082	0.290	0.000	5.021	49.124	0.094	4.775	0.745	37.167	0.104	0.485	97.887	14.243	24.351	99.314
01-JR-MA-135-057	0.078	0.023	0.000	7.858	52.597	0.026	2.249	0.878	33.856	0.069	1.279	98.913	6.854	27.689	99.600
01-JR-MA-135-058	0.080	0.976	0.016	13.915	46.560	0.387	10.326	0.233	26.548	0.084	0.098	99.223	7.773	19.554	100.002
01-JR-MA-135-059	0.096	0.267	0.012	3.649	48.048	0.138	2.564	0.901	42.049	0.107	0.389	98.220	15.990	27.661	99.822
01-JR-MA-135-060	0.141	0.295	0.000	12.259	54.086	0.148	9.956	0.241	21.850	0.129	0.054	99.159	3.354	18.832	99.495
01-JR-MA-135-061	0.050	0.397	0.023	14.550	48.297	0.235	7.296	0.381	27.395	0.094	0.219	98.937	4.784	23.090	99.416
01-JR-MA-135-062	0.056	0.406	0.024	5.298	49.485	0.106	1.856	1.618	38.732	0.102	0.842	98.525	11.998	27.936	99.727
01-JR-MA-135-063	0.136	0.301	0.000	12.567	52.971	0.141	9.433	0.283	23.423	0.103	0.084	99.442	4.106	19.728	99.853
01-JR-MA-135-064	0.145	0.321	0.000	11.830	52.129	0.143	5.759	1.268	27.635	0.092	0.301	99.623	3.883	24.141	100.012
01-JR-MA-135-066	0.066	0.402	0.007	11.784	54.311	0.227	10.832	0.266	21.074	0.107	0.102	99.178	3.958	17.513	99.575
01-JR-MA-135-067	0.226	0.839	0.054	26.726	39.660	0.094	16.844	0.135	15.056	0.240	0.038	99.912	4.060	11.403	100.319
01-JR-MA-135-068	0.051	0.923	0.000	13.048	50.803	0.289	8.635	0.291	24.975	0.140	0.143	99.298	3.800	21.556	99.679
01-JR-MA-135-069	0.147	1.071	0.000	7.067	52.482	0.319	8.581	0.255	28.736	0.115	0.077	98.850	8.534	21.057	99.705
01-JR-MA-135-070	0.114	0.602	0.028	9.640	47.805	0.162	0.397	0.476	34.493	0.190	4.703	98.610	6.500	28.645	99.261
01-JR-MA-135-071	0.100	0.873	0.047	13.418	48.730	0.354	10.611	0.261	24.771	0.115	0.099	99.379	6.502	18.920	100.030
01-JR-MA-135-072	0.118	0.439	0.001	6.405	52.683	0.062	0.538	0.242	35.960	0.124	2.048	98.620	6.247	30.339	99.246
01-JR-MA-135-073	0.068	0.445	0.059	11.970	50.926	0.201	9.447	0.278	25.601	0.096	0.092	99.183	6.486	19.765	99.833

Sample	SiO2	TiO2	Nb2O5	Al2O3	Cr2O3	V2O5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe2O3	FeO	Total
01-JR-MA-135-074	0.094	0.540	0.104	15.880	50.307	0.153	11.183	0.263	20.966	0.119	0.072	99.681	3.373	17.931	100.019
01-JR-MA-135-075	0.163	0.323	0.063	14.100	54.967	0.096	14.776	0.145	14.521	0.193	0.031	99.378	2.918	11.895	99.670
01-JR-MA-135-076	0.108	0.401	0.039	12.407	52.672	0.297	9.866	0.220	23.016	0.086	0.072	99.184	4.040	19.381	99.589
01-JR-MA-135-077	0.124	0.388	0.035	12.248	51.950	0.225	9.986	0.261	23.812	0.087	0.102	99.218	5.317	19.028	99.751
01-JR-MA-135-078	0.156	0.321	0.013	13.801	54.161	0.155	13.349	0.176	16.970	0.152	0.035	99.289	3.248	14.047	99.614
01-JR-MA-135-079	0.150	0.357	0.023	8.887	53.859	0.092	6.278	0.583	27.916	0.151	0.472	98.768	5.362	23.091	99.305
01-JR-MA-135-080	0.123	0.414	0.000	10.771	54.986	0.139	11.365	0.528	20.642	0.158	0.053	99.179	4.908	16.225	99.671
01-JR-MA-135-081	0.119	0.352	0.027	8.536	51.707	0.095	0.421	1.973	32.189	0.026	3.539	98.984	4.742	27.922	99.459
01-JR-MA-135-082	0.165	1.142	0.010	29.412	35.155	0.186	16.447	0.168	16.823	0.189	0.064	99.761	4.603	12.681	100.222
01-JR-MA-135-083	0.065	0.520	0.032	12.242	50.763	0.230	8.521	0.291	26.308	0.103	0.104	99.179	5.609	21.261	99.741
01-JR-MA-135-084	0.103	0.732	0.000	14.296	49.937	0.145	6.344	0.385	26.468	0.127	0.212	98.749	2.097	24.581	98.959
01-JR-MA-135-085	0.080	1.803	0.023	12.270	48.059	0.341	8.324	0.239	27.411	0.169	0.106	98.825	5.156	22.771	99.342
01-JR-MA-135-086	0.076	0.898	0.031	14.201	48.620	0.200	6.691	0.404	27.861	0.121	0.140	99.243	3.731	24.503	99.617
01-JR-MA-135-088	0.149	0.345	0.000	12.531	53.756	0.171	10.953	0.214	20.932	0.140	0.081	99.272	3.841	17.476	99.657
01-JR-MA-135-089	0.122	0.312	0.061	11.955	53.229	0.242	9.482	0.303	23.292	0.108	0.106	99.212	4.054	19.644	99.618
01-JR-MA-135-090	0.079	0.971	0.000	14.510	47.262	0.236	6.396	0.386	28.962	0.089	0.121	99.012	4.290	25.102	99.442
01-JR-MA-135-091	0.081	0.599	0.000	12.462	51.564	0.289	9.617	0.272	23.555	0.106	0.114	98.659	4.405	19.591	99.100
01-JR-MA-135-092	0.158	0.461	0.032	12.095	51.460	0.236	9.392	0.270	25.361	0.085	0.111	99.661	5.767	20.172	100.239
01-JR-MA-135-093	0.119	0.448	0.000	15.145	49.034	0.271	12.115	0.221	21.897	0.077	0.072	99.399	6.044	16.458	100.005
01-JR-MA-135-094	0.080	0.363	0.000	6.219	51.617	0.120	5.717	0.353	33.547	0.093	0.138	98.247	10.631	23.982	99.312
01-JR-MA-135-095	0.182	0.354	0.014	10.608	54.885	0.113	9.106	0.335	23.630	0.116	0.047	99.390	4.090	19.949	99.800
01-JR-MA-135-096	0.148	0.434	0.000	7.923	51.586	0.053	0.660	1.660	34.640	0.128	1.188	98.420	5.499	29.692	98.971
01-JR-MA-135-097	0.085	0.507	0.002	12.022	51.735	0.253	10.124	0.248	23.465	0.100	0.100	98.641	5.333	18.666	99.175
01-JR-MA-135-117	0.035	0.213	0.070	4.983	51.401	0.067	2.239	1.698	36.544	0.078	0.711	98.039	10.644	26.967	99.105
01-JR-MA-136-010	0.120	0.293	0.060	11.995	54.282	0.140	11.407	0.242	20.281	0.127	0.062	99.009	4.153	16.544	99.425
01-JR-MA-138-006	0.081	0.423	0.013	12.349	49.103	0.194	1.594	0.504	34.824	0.031	0.173	99.289	3.653	31.537	99.655
01-JR-MA-138-007	0.150	0.343	0.031	7.941	58.357	0.058	12.264	0.215	19.496	0.154	0.052	99.061	5.474	14.570	99.609
01-JR-MA-139-016	0.128	0.351	0.000	12.431	48.032	0.145	0.714	1.284	35.139	0.072	0.648	98.944	4.113	31.438	99.356
01-JR-MA-139-017	0.110	0.475	0.000	12.283	51.196	0.280	7.984	1.058	25.699	0.120	0.208	99.413	4.854	21.332	99.899
01-JR-MA-139-018	0.133	0.277	0.000	14.793	52.372	0.124	7.187	0.442	23.657	0.015	0.522	99.522	0.777	22.958	99.600
01-JR-MA-139-019	0.152	0.401	0.000	14.687	50.467	0.214	10.442	0.234	22.372	0.130	0.050	99.149	4.079	18.702	99.558
01-JR-MA-139-020	0.133	0.385	0.000	9.986	54.058	0.107	10.407	0.271	23.281	0.157	0.069	98.854	6.237	17.669	99.479
01-JR-MA-139-021	0.053	2.158	0.031	12.309	45.564	0.334	9.191	0.302	28.720	0.129	0.117	98.908	7.728	21.766	99.682
01-JR-MA-140-008	0.139	0.272	0.000	13.187	49.197	0.156	2.219	1.364	31.216	0.035	1.648	99.433	3.142	28.389	99.748
01-JR-MA-141-011	0.160	0.236	0.025	5.197	56.522	0.058	0.769	2.255	33.189	0.135	0.601	99.147	4.528	29.115	99.601
01-JR-MA-142-017	0.128	0.397	0.026	11.924	50.243	0.215	4.748	0.431	30.646	0.044	0.453	99.255	4.572	26.532	99.713
01-JR-MA-142-018	0.142	0.251	0.047	6.890	53.933	0.094	0.582	1.369	34.078	0.110	0.883	98.379	4.372	30.144	98.817
01-JR-MA-142-019	0.079	0.821	0.051	11.360	51.522	0.296	10.127	0.261	24.006	0.107	0.101	98.731	5.609	18.959	99.293
01-JR-MA-142-020	0.137	0.519	0.007	28.316	32.532	0.310	13.388	0.178	23.440	0.182	0.059	99.068	7.587	16.614	99.828
01-JR-MA-145-002	0.072	0.517	0.003	13.304	52.469	0.255	10.037	0.317	21.772	0.109	0.128	98.983	3.118	18.966	99.295
01-JR-MA-145-003	0.078	1.252	0.052	13.058	44.347	0.414	5.523	0.256	33.586	0.089	0.165	98.820	7.464	26.870	99.568
01-JR-MA-147-018	0.068	1.504	0.029	13.839	48.498	0.436	11.082	0.259	22.997	0.115	0.133	98.960	4.765	18.709	99.437
01-JR-MA-147-019	0.133	0.318	0.022	6.253	55.484	0.074	0.367	1.982	32.151	0.071	2.001	98.856	3.616	28.898	99.218
01-JR-MA-147-020	0.099	1.227	0.008	13.739	48.527	0.297	9.876	0.265	24.664	0.162	0.123	98.987	5.110	20.066	99.499
01-JR-MA-147-021	0.168	0.257	0.000	13.342	56.464	0.094	15.583	0.133	13.208	0.215	0.011	99.475	3.048	10.466	99.780
01-JR-MA-147-022	0.082	1.431	0.012	12.539	47.094	0.375	9.802	0.272	27.166	0.142	0.128	99.043	7.581	20.344	99.803

Sample	SiO_2	TiO_2	Nb_2O_5	Al_2O_3	Cr_2O_3	V_2O_5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe_2O_3	FeO	Total
01-JR-MA-148-004	0.082	0.413	0.050	14.521	52.616	0.208	12.859	0.270	18.068	0.074	0.142	99.303	3.513	14.907	99.655
01-JR-MA-148-005	0.216	0.501	0.009	31.169	35.249	0.095	17.398	0.120	14.481	0.211	0.037	99.486	4.086	10.804	99.895
01-JR-MA-148-006	0.070	0.023	0.000	15.715	54.706	0.360	12.641	0.221	15.703	0.054	0.160	99.653	0.378	15.363	99.691
01-JR-MA-149-006	0.162	0.386	0.001	12.609	56.262	0.330	10.193	0.274	19.228	0.092	0.124	99.661	0.291	18.966	99.690
01-JR-MA-151-011	0.126	0.011	0.000	19.185	49.781	0.159	12.423	0.147	17.671	0.112	0.076	99.691	1.720	16.123	99.863
01-JR-MA-151-012	0.200	0.278	0.000	13.509	53.494	0.146	9.976	0.785	20.760	0.195	0.063	99.406	2.511	18.501	99.658
01-JR-MA-151-013	0.140	0.480	0.000	10.364	56.105	0.193	11.003	0.246	20.142	0.125	0.168	98.966	3.492	17.000	99.316
01-JR-MA-151-014	0.200	0.358	0.015	11.598	52.789	0.214	9.743	0.298	23.736	0.106	0.075	99.132	4.965	19.269	99.629
01-JR-MA-151-021	0.175	0.308	0.003	13.517	53.825	0.123	11.992	0.201	19.039	0.139	0.062	99.384	3.346	16.029	99.719
01-JR-MA-151-023	0.055	0.108	0.004	13.447	51.924	0.310	11.615	0.271	21.098	0.097	0.166	99.095	5.261	16.364	99.622
01-JR-MA-153-002	0.129	0.497	0.000	29.107	32.147	0.233	13.638	0.203	23.079	0.196	0.056	99.285	7.609	16.233	100.047
01-JR-MA-156-016	0.157	0.382	0.000	12.077	52.586	0.242	9.674	0.282	23.815	0.096	0.095	99.406	4.755	19.536	99.882
01-JR-MA-158-006	0.069	0.685	0.031	11.622	51.691	0.239	9.008	0.769	24.455	0.108	0.099	98.776	4.992	19.963	99.276
01-JR-MA-162-030	0.095	0.493	0.000	14.381	49.320	0.207	8.403	0.226	25.996	0.118	0.129	99.368	4.663	21.800	99.835
01-JR-MA-165-064	0.077	1.698	0.020	11.654	43.056	0.452	8.008	0.281	33.365	0.132	0.130	98.873	11.167	23.317	99.992
01-JR-MA-165-065	0.167	0.301	0.006	13.576	52.873	0.135	11.038	0.223	20.813	0.143	0.051	99.326	3.710	17.475	99.698
01-JR-MA-165-066	0.104	2.193	0.000	12.751	45.467	0.416	10.001	0.264	27.754	0.135	0.088	99.173	7.580	20.933	99.932
01-JR-MA-165-067	0.084	0.888	0.000	12.430	49.839	0.326	9.455	0.266	25.287	0.092	0.098	98.765	5.604	20.244	99.327
01-JR-MA-165-068	0.078	0.630	0.010	13.822	48.994	0.165	5.889	1.531	26.956	0.022	0.831	98.928	3.751	23.581	99.304
01-JR-MA-165-069	0.089	0.947	0.042	14.512	46.471	0.327	6.208	0.398	29.979	0.135	0.195	99.303	4.931	25.542	99.797
01-JR-MA-165-070	0.057	1.864	0.000	11.039	50.166	0.328	8.622	0.326	25.931	0.184	0.164	98.681	4.490	21.890	99.131
01-JR-MA-165-071	0.122	0.333	0.000	14.243	50.485	0.184	9.187	0.230	24.688	0.111	0.081	99.664	4.572	20.574	100.122
01-JR-MA-165-072	0.142	1.630	0.000	25.007	38.767	0.183	15.351	0.139	17.901	0.204	0.060	99.384	4.387	13.954	99.824
01-JR-MA-165-073	0.199	1.426	0.003	26.499	37.624	0.121	15.870	0.134	17.253	0.222	0.074	99.425	4.525	13.181	99.878
01-JR-MA-165-074	0.119	0.372	0.057	12.592	52.319	0.181	9.087	0.337	24.053	0.116	0.096	99.329	4.163	20.307	99.746
01-JR-MA-165-075	0.157	0.870	0.000	22.087	44.595	0.127	15.697	0.162	15.638	0.193	0.063	99.589	3.763	12.252	99.966
01-JR-MA-165-076	0.143	0.398	0.015	15.532	50.428	0.166	12.480	0.215	19.499	0.154	0.061	99.091	4.321	15.611	99.524
01-JR-MA-165-077	0.080	1.275	0.000	13.893	45.709	0.295	9.097	0.278	28.061	0.095	0.123	98.906	7.452	21.356	99.653
01-JR-MA-165-078	0.140	1.472	0.000	26.214	34.364	0.169	14.493	0.190	21.713	0.206	0.084	99.045	7.288	15.155	99.775
01-JR-MA-165-079	0.076	1.620	0.040	11.396	49.560	0.311	9.644	0.246	25.969	0.131	0.126	99.119	6.041	20.533	99.724
01-JR-MA-165-080	0.169	0.267	0.022	12.675	56.011	0.142	13.680	0.186	15.880	0.170	0.022	99.224	2.892	13.277	99.514
01-JR-MA-165-081	0.131	0.300	0.000	12.693	54.013	0.109	10.098	0.273	21.452	0.106	0.059	99.234	3.147	18.620	99.549
01-JR-MA-165-083	0.103	1.646	0.016	12.706	48.706	0.304	10.716	0.290	24.240	0.140	0.080	98.947	5.765	19.052	99.525
01-JR-MA-165-084	0.058	0.958	0.000	12.675	49.772	0.264	6.778	0.480	27.772	0.124	0.197	99.078	4.135	24.052	99.492
01-JR-MA-165-085	0.075	1.146	0.047	14.379	47.304	0.275	7.059	0.379	28.387	0.143	0.133	99.327	4.462	24.372	99.774
01-JR-MA-165-086	0.126	1.397	0.000	28.651	32.553	0.120	14.192	0.363	21.440	0.182	0.081	99.105	6.386	15.694	99.745
01-JR-MA-165-087	0.090	0.437	0.005	13.022	52.796	0.270	10.874	0.242	21.940	0.112	0.064	99.852	4.325	18.048	100.285
01-JR-MA-165-091	0.083	1.179	0.000	11.429	46.890	0.303	6.181	0.752	32.102	0.114	0.129	99.162	7.948	24.950	99.958
01-JR-MA-165-092	0.088	1.065	0.023	13.625	49.227	0.281	6.511	0.386	28.423	0.105	0.285	100.019	3.670	25.121	100.387
01-JR-MA-165-093	0.109	0.435	0.000	11.630	51.948	0.210	7.207	0.940	27.503	0.109	0.070	100.161	5.254	22.775	100.687
01-JR-MA-165-094	0.094	1.878	0.000	11.078	49.483	0.323	8.937	0.290	27.262	0.119	0.130	99.594	5.942	21.916	100.189
01-JR-MA-165-095	0.075	0.291	0.000	11.588	54.361	0.191	8.813	0.322	24.199	0.104	0.150	100.094	3.979	20.618	100.493
01-JR-MA-165-096	0.102	0.342	0.000	12.731	49.967	0.185	4.455	0.272	31.765	0.036	0.120	99.975	4.564	27.658	100.432
01-JR-MA-165-097	0.100	0.793	0.025	15.271	49.501	0.290	12.117	0.285	21.125	0.131	0.091	99.729	4.844	16.766	100.214
01-JR-MA-165-098	0.160	0.297	0.000	13.538	53.888	0.151	11.265	0.190	20.145	0.164	0.053	99.851	3.164	17.298	100.168
01-JR-MA-165-099	0.075	0.658	0.008	14.568	48.548	0.263	7.210	0.509	28.135	0.168	0.133	100.275	4.786	23.829	100.754

Sample	SiO_2	TiO_2	Nb_2O_5	Al_2O_3	Cr_2O_3	V_2O_3	MgO	MnO	FeO*	NiO	ZnO	Total	Fe_2O_3	FeO	Total
01-JR-MA-165-100	0.136	0.367	0.013	14.779	54.087	0.142	13.815	0.198	16.244	0.151	0.041	99.973	2.861	13.670	100.260
01-JR-MA-165-101	0.054	1.416	0.000	13.321	46.450	0.362	5.185	0.472	32.320	0.123	0.381	100.084	5.537	27.338	100.639
01-JR-MA-165-102	0.081	0.692	0.000	13.549	51.547	0.235	9.493	0.317	23.739	0.098	0.109	99.860	3.828	20.295	100.244
01-JR-MA-165-103	0.189	0.897	0.030	32.850	31.459	0.103	16.635	0.142	17.472	0.235	0.057	100.069	5.265	12.734	100.597
01-JR-MA-165-104	0.130	0.327	0.000	14.515	49.747	0.156	6.403	1.481	26.201	0.048	0.682	99.690	3.472	23.077	100.038
01-JR-MA-165-105	0.130	0.284	0.000	12.719	53.432	0.163	8.401	0.347	24.417	0.119	0.046	100.058	3.262	21.482	100.385
01-JR-MA-165-106	0.081	1.085	0.046	14.313	49.577	0.238	10.295	0.220	23.536	0.146	0.107	99.644	4.393	19.583	100.084
01-JR-MA-165-107	0.066	1.197	0.009	14.194	46.506	0.339	5.860	0.392	30.731	0.114	0.258	99.666	4.933	26.292	100.160
01-JR-MA-165-108	0.091	0.854	0.030	12.499	52.625	0.277	10.743	0.288	22.834	0.104	0.100	100.445	4.593	18.701	100.905
01-JR-MA-165-109	0.157	0.334	0.044	14.644	54.120	0.153	13.689	0.154	16.740	0.181	0.031	100.247	3.044	14.001	100.552
01-JR-MA-165-110	0.134	0.351	0.009	14.218	50.078	0.102	11.679	0.375	21.967	0.149	0.064	99.126	6.237	16.355	99.751
01-JR-MA-165-150	0.088	0.381	0.021	13.379	50.529	0.206	7.260	0.410	26.443	0.086	0.377	99.180	3.997	22.847	99.580
01-JR-MA-165-154	0.140	0.854	0.000	12.582	48.951	0.210	6.384	0.405	29.341	0.117	0.172	99.156	5.139	24.717	99.671
01-JR-MA-165-157	0.221	0.282	0.032	13.039	57.123	0.090	15.539	0.134	12.714	0.207	0.022	99.403	2.389	10.564	99.642
01-JR-MA-165-158	0.132	0.340	0.056	9.541	55.121	0.101	11.069	0.300	22.276	0.137	0.067	99.140	6.228	16.672	99.764
01-JR-MA-165-160	0.060	0.209	0.041	8.492	46.111	0.202	7.746	0.340	34.514	0.170	0.144	98.029	14.831	21.169	99.515
01-JR-MA-165-162	0.064	0.260	0.060	13.756	56.030	0.253	12.450	0.236	15.951	0.075	0.143	99.278	0.714	15.309	99.349
01-JR-MA-166-002	0.094	0.244	0.000	16.600	51.746	0.353	11.581	0.283	19.378	0.081	0.203	100.563	2.047	17.536	100.768
01-JR-MA-167-021	0.073	0.931	0.011	14.742	49.301	0.309	8.681	0.315	25.088	0.135	0.117	99.703	3.477	21.959	100.051
01-JR-MA-167-022	0.095	0.325	0.041	12.723	50.562	0.117	2.841	2.573	28.113	0.020	2.669	100.079	3.023	25.393	100.382
01-JR-MA-167-023	0.130	0.240	0.000	7.282	54.032	0.104	0.587	1.825	33.866	0.087	1.647	99.800	4.889	29.467	100.290
01-JR-MA-167-024	0.111	0.778	0.080	11.588	49.413	0.277	8.789	0.279	28.369	0.095	0.110	99.889	7.704	21.437	100.661
01-JR-MA-167-025	0.175	0.337	0.081	12.314	55.165	0.178	10.623	0.200	21.092	0.163	0.113	100.441	3.007	18.386	100.742
01-JR-MA-167-027	0.119	0.243	0.000	11.652	53.813	0.087	9.023	0.212	24.300	0.127	0.100	99.676	4.590	20.170	100.136
01-JR-MA-168-005	0.187	0.162	0.000	4.048	59.807	0.037	1.280	1.155	31.283	0.028	1.924	99.911	3.333	28.284	100.245
01-JR-MA-169-005	0.080	1.661	0.000	13.157	45.892	0.338	7.367	0.261	30.494	0.111	0.108	99.469	6.677	24.486	100.138
01-JR-MA-169-006	0.192	0.298	0.011	13.422	52.616	0.114	9.706	0.221	23.237	0.129	0.075	100.021	3.918	19.712	100.414
01-JR-MA-169-007	0.155	1.321	0.001	13.425	48.579	0.146	12.755	0.165	22.674	0.162	0.044	99.427	7.550	15.880	100.183
01-JR-MA-169-008	0.146	0.438	0.015	9.760	55.962	0.150	9.284	0.268	23.686	0.054	0.127	99.890	4.265	19.848	100.317
01-JR-MA-169-012	0.121	0.440	0.000	9.573	55.311	0.089	9.208	0.300	23.775	0.110	0.119	99.046	4.803	19.453	99.527
01-JR-MA-170-003	0.165	0.432	0.000	9.848	56.631	0.150	9.713	0.298	22.136	0.124	0.180	99.677	3.505	18.982	100.028
01-JR-MA-172-018	0.167	0.324	0.000	12.709	55.181	0.140	11.483	0.237	19.583	0.125	0.095	100.044	3.025	16.861	100.347
01-JR-MA-172-019	0.123	0.313	0.043	13.120	51.425	0.161	5.795	0.464	27.711	0.031	0.479	99.665	2.981	25.028	99.964
01-JR-MA-172-020	0.149	0.452	0.016	10.284	57.301	0.181	11.874	0.192	19.039	0.146	0.162	99.796	3.442	15.942	100.141
01-JR-MA-173-016	0.082	1.279	0.000	11.936	44.422	0.406	3.883	0.474	36.549	0.085	0.353	99.469	8.383	29.006	100.309
01-JR-MA-173-017	0.126	0.527	0.025	13.518	51.456	0.186	6.827	0.427	26.304	0.072	0.346	99.814	2.681	23.892	[illegible]0.083
01-JR-MA-173-018	0.113	0.527	0.000	9.211	52.289	0.240	1.644	0.556	33.863	0.052	0.897	99.392	3.786	30.456	99.771
01-JR-MA-173-019	0.124	0.493	0.027	13.562	49.288	0.244	9.095	0.243	26.281	0.045	0.112	99.514	6.011	20.872	100.116
01-JR-MA-173-022	0.173	0.298	0.019	12.330	54.287	0.177	10.137	0.258	22.019	0.116	0.097	99.911	3.496	18.874	100.261
01-JR-MA-173-023	0.099	0.374	0.000	13.462	51.832	0.134	9.036	0.273	24.272	0.127	0.104	99.713	4.148	20.540	100.129
01-JR-MA-173-024	0.115	0.397	0.034	13.027	52.328	0.247	10.334	0.285	22.780	0.116	0.084	99.747	4.460	18.767	100.194
01-JR-MA-173-025	0.136	0.434	0.036	9.817	55.341	0.166	6.805	0.172	27.135	0.142	0.215	100.399	3.744	23.766	100.774
01-JR-MA-173-026	0.097	0.129	0.016	13.754	56.602	0.281	11.994	0.216	17.062	0.083	0.145	100.379	0.848	16.299	100.464
01-JR-MA-173-027	0.097	1.044	0.000	10.387	50.558	0.324	8.584	0.282	28.045	0.055	0.100	99.476	7.073	21.681	100.185
01-JR-MA-173-028	0.114	0.329	0.011	12.489	55.282	0.160	11.482	0.255	19.410	0.083	0.063	99.678	2.968	16.739	99.975
01-JR-MA-174-015	0.154	0.409	0.000	9.628	55.368	0.152	7.070	0.244	26.269	0.115	0.147	99.556	3.613	23.018	99.918

Sample	SiO_2	TiO_2	Nb_2O_5	Al_2O_3	Cr_2O_3	V_2O_5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe_2O_3	FeO	[illegible]
01-JR-MA-174-016	0.190	0.246	0.000	13.595	56.539	0.133	14.614	0.171	14.784	0.178	0.049	100.499	2.700	12.354	100.770
01-JR-MA-174-017	0.177	0.450	0.000	10.515	57.032	0.170	11.259	0.255	19.822	0.137	0.087	99.904	3.173	16.967	100.222
01-JR-MA-174-018	0.077	1.830	0.000	10.996	47.476	0.427	8.707	0.294	29.780	0.100	0.101	99.788	8.101	22.491	100.600
01-JR-MA-174-019	0.075	0.945	0.000	15.916	47.484	0.252	9.931	0.296	24.763	0.139	0.082	99.883	4.986	20.277	100.383
01-JR-MA-174-020	0.191	0.282	0.007	14.961	54.520	0.130	14.754	0.122	14.709	0.202	0.052	99.930	2.752	12.233	100.206
01-JR-MA-179-013	0.123	0.346	0.014	12.541	53.520	0.228	10.993	0.225	21.909	0.100	0.081	100.080	4.583	17.785	100.539
01-JR-MA-180-059	0.116	0.322	0.020	14.070	53.953	0.179	12.816	0.200	17.888	0.156	0.049	99.769	3.197	15.011	100.089
01-JR-MA-180-061	0.086	1.541	0.035	12.525	47.093	0.441	9.519	0.299	28.197	0.098	0.110	99.944	7.635	21.327	100.709
01-JR-MA-180-062	0.081	0.992	0.061	19.553	37.398	0.340	2.846	0.423	37.903	0.116	0.202	99.915	6.818	31.768	100.598
01-JR-MA-180-063	0.133	1.019	0.000	6.511	53.571	0.222	8.187	0.286	29.255	0.116	0.080	99.380	8.626	21.493	100.244
01-JR-MA-180-066	0.170	0.263	0.030	12.428	57.008	0.117	14.171	0.157	15.485	0.158	0.052	100.039	3.061	12.731	100.346
01-JR-MA-180-067	0.147	0.330	0.064	12.965	55.320	0.137	12.322	0.217	18.106	0.146	0.062	99.816	2.778	15.606	100.094
01-JR-MA-180-068	0.148	0.446	0.007	10.252	57.348	0.181	11.214	0.221	20.405	0.127	0.097	100.446	3.571	17.192	100.804
01-JR-MA-180-075	0.082	0.656	0.010	16.296	46.107	0.223	12.265	0.252	23.464	0.184	0.107	99.646	7.822	16.425	100.430
01-JR-MA-181-032	0.102	0.427	0.004	12.149	52.289	0.236	10.289	0.253	24.161	0.110	0.102	100.122	5.927	18.828	100.716
01-JR-MA-181-033	0.170	0.305	0.017	12.228	56.014	0.038	13.712	0.165	16.784	0.172	0.042	99.647	4.003	13.182	100.048
01-JR-MA-181-034	0.098	1.051	0.040	13.841	49.543	0.244	7.605	0.357	27.176	0.126	0.121	100.202	3.906	23.662	100.593
01-JR-MA-182-027	0.185	0.295	0.003	13.279	54.408	0.175	10.402	0.277	21.128	0.142	0.066	100.360	2.669	18.726	100.627
01-JR-MA-182-028	0.099	0.399	0.000	12.005	54.980	0.294	10.514	0.262	21.310	0.088	0.101	100.052	3.164	18.463	100.369
01-JR-MA-182-029	0.181	0.308	0.058	14.839	52.025	0.136	11.759	0.260	20.217	0.154	0.048	99.985	3.782	16.814	100.364
01-JR-MA-182-030	0.164	0.288	0.000	13.982	55.543	0.142	14.614	0.127	14.672	0.182	0.019	99.733	2.686	12.255	100.002
01-JR-MA-182-031	0.189	0.439	0.000	9.983	56.325	0.155	9.725	0.250	22.555	0.095	0.226	99.942	3.780	19.154	100.321
01-JR-MA-182-050	0.159	0.438	0.006	10.048	55.586	0.160	10.756	0.201	21.130	0.136	0.071	98.691	4.237	17.318	99.115
01-JR-MA-183-011	0.137	0.630	0.021	8.564	52.790	0.140	3.083	1.037	32.438	0.131	0.465	99.436	4.923	28.008	99.929
01-JR-MA-183-012	0.118	0.316	0.028	13.799	56.674	0.067	14.230	0.130	14.379	0.124	0.048	99.913	1.800	12.759	100.093
01-JR-MA-183-013	0.156	0.445	0.023	10.179	57.195	0.123	11.566	0.250	19.700	0.146	0.083	99.866	3.715	16.358	100.238
01-JR-MA-183-014	0.050	0.637	0.009	13.824	51.963	0.188	10.185	0.272	22.313	0.105	0.118	99.664	3.585	19.088	100.023
01-JR-MA-183-015	0.090	0.556	0.000	12.614	48.482	0.307	7.263	0.424	29.900	0.076	0.131	99.843	7.107	23.505	100.555
01-JR-MA-183-016	0.099	0.378	0.015	11.725	51.655	0.226	8.214	0.265	26.426	0.080	0.113	99.196	5.379	21.586	99.735
01-JR-MA-183-017	0.176	0.303	0.000	14.020	56.188	0.137	15.297	0.137	13.454	0.193	0.018	99.923	2.423	11.274	100.166
01-JR-MA-183-018	0.099	0.649	0.078	14.394	53.354	0.247	12.199	0.220	18.983	0.102	0.067	100.392	2.597	16.646	100.652
01-JR-MA-183-019	0.207	0.256	0.000	12.219	53.229	0.099	5.981	1.177	25.857	0.088	0.832	99.945	2.613	23.506	100.207
01-JR-MA-187-008	0.095	0.459	0.004	12.364	50.831	0.220	6.962	1.220	27.691	0.105	0.252	100.203	5.371	22.858	100.741
01-JR-MA-187-009	0.177	0.324	0.063	14.342	54.187	0.159	13.425	0.156	17.441	0.149	0.049	100.472	3.278	14.491	100.800
01-JR-MA-187-010	0.127	0.369	0.000	12.594	52.122	0.241	8.359	0.294	26.022	0.103	0.147	100.378	4.667	21.822	100.846
01-JR-MA-188-020	0.079	0.475	0.002	9.936	52.041	0.170	9.362	0.325	27.220	0.128	0.143	99.881	8.420	19.643	100.725
01-JR-MA-188-021	0.146	0.434	0.020	11.958	54.541	0.240	11.416	0.216	20.278	0.105	0.086	99.440	3.689	16.958	99.810
01-JR-MA-188-022	0.147	0.307	0.009	13.748	53.374	0.169	11.665	0.292	20.507	0.172	0.045	100.435	4.068	16.847	100.843
01-JR-MA-188-023	0.179	0.363	0.000	15.499	51.390	0.176	12.749	0.207	19.323	0.154	0.052	100.092	4.197	15.546	100.513
01-JR-MA-191-006	0.138	0.347	0.000	13.865	52.477	0.166	12.315	0.295	19.756	0.031	0.037	99.427	4.501	15.706	99.878
01-JR-MA-192-003	0.076	0.546	0.015	14.276	50.277	0.229	7.332	0.341	26.404	0.117	0.224	99.837	3.316	23.421	100.169
01-JR-MA-192-004	0.125	0.298	0.000	12.955	53.311	0.153	8.222	0.669	24.104	0.031	0.209	100.077	3.009	21.396	100.379
01-JR-MA-192-005	0.133	0.651	0.000	14.831	47.686	0.189	10.117	0.461	25.310	0.133	0.094	99.605	6.678	19.301	100.274
01-JR-MA-192-006	0.077	0.474	0.003	13.355	50.988	0.265	10.339	0.265	23.833	0.089	0.085	99.773	5.482	18.900	100.322
01-JR-MA-192-008	0.143	0.262	0.000	8.542	55.579	0.137	1.341	2.796	28.338	0.090	2.703	99.931	1.890	26.637	100.120
01-JR-MA-192-009	0.159	0.049	0.036	9.180	59.520	0.141	9.135	0.512	20.320	0.088	0.131	99.271	1.326	19.127	99.404

Sample	SiO_2	TiO_2	[illegible]	Al_2O_3	Cr_2O_3	V_2O_3	MgO	MnO	FeO*	NiO	ZnO	Total	Fe_2O_3	FeO	Total
01-JR-MA-196-007	0.088	0.560	0.006	12.075	51.592	0.244	10.201	0.282	24.813	0.103	0.073	100.037	6.403	19.052	100.678
01-JR-MA-196-008	0.076	0.836	0.000	13.861	49.387	0.278	9.177	0.294	25.709	0.129	0.182	99.929	5.245	20.989	100.455
01-JR-MA-196-009	0.159	0.289	0.030	13.863	54.989	0.123	13.175	0.195	17.187	0.164	0.051	100.225	2.969	14.515	100.522
01-JR-MA-197-002	0.055	0.097	0.023	4.443	51.353	0.128	0.670	0.884	40.402	0.011	0.675	98.741	11.107	30.408	99.854
01-JR-MA-197-003	0.080	0.037	0.029	4.356	54.814	0.070	0.938	0.721	36.966	0.008	0.911	98.930	7.925	29.835	99.724
01-JR-MA-197-004	0.081	0.032	0.041	4.043	55.696	0.000	0.951	0.981	36.191	0.011	0.907	98.934	7.548	29.399	99.690
01-JR-MA-197-006	0.070	0.263	0.000	5.102	53.012	0.209	1.170	0.536	38.269	0.011	0.604	99.246	8.573	30.555	100.105
01-JR-MA-197-007	0.067	0.046	0.031	5.542	50.531	0.055	0.894	0.965	40.020	0.018	0.789	98.958	11.159	29.979	100.076
01-JR-MA-197-008	0.048	0.122	0.000	6.390	52.386	0.113	1.465	0.324	37.139	0.009	0.919	98.915	8.141	29.814	99.731
01-JR-MA-197-009	0.082	0.086	0.000	6.004	50.043	0.098	1.043	0.735	40.393	0.013	0.713	99.210	11.212	30.305	100.333
01-JR-MA-197-010	0.097	0.030	0.000	5.148	51.281	0.051	0.884	1.218	39.157	0.027	0.885	98.778	10.729	29.503	99.853
01-JR-MA-197-011	0.061	0.057	0.001	4.649	51.116	0.104	0.936	0.518	40.526	0.022	0.612	98.602	11.340	30.322	99.738
01-JR-MA-197-012	0.061	0.131	0.000	3.981	52.853	0.120	1.308	0.491	39.275	0.023	0.656	98.899	10.525	29.805	99.953
01-JR-MA-197-013	0.087	0.127	0.006	3.599	51.379	0.114	0.977	0.535	41.209	0.022	0.583	98.638	12.184	30.246	99.859
01-JR-MA-197-015	0.066	0.108	0.041	4.600	50.410	0.099	0.672	1.102	40.979	0.005	0.753	98.835	11.996	30.185	100.037
01-JR-MA-197-016	0.091	0.066	0.074	4.581	49.950	0.147	0.805	0.727	41.839	0.016	0.608	98.904	12.478	30.611	100.154
01-JR-MA-197-017	0.121	0.046	0.000	5.315	52.035	0.089	0.822	1.078	38.670	0.001	1.006	99.183	9.749	29.898	100.160
01-JR-MA-197-018	0.066	0.146	0.015	3.687	51.333	0.120	1.323	0.406	40.822	0.029	0.709	98.656	12.302	29.753	99.889
01-JR-MA-197-019	0.064	0.050	0.035	3.119	57.010	0.099	1.785	0.361	35.418	0.036	0.924	98.901	7.475	28.692	99.650
01-JR-MA-197-020	0.171	0.292	0.026	12.766	54.102	0.109	10.650	0.197	21.768	0.192	0.043	100.316	3.938	18.224	100.711
01-JR-MA-197-021	0.073	0.055	0.000	4.711	51.383	0.128	0.762	1.041	39.752	0.018	0.816	98.739	10.868	29.973	99.828
01-JR-MA-197-022	0.057	0.120	0.000	5.520	50.407	0.113	0.670	0.651	40.162	0.020	0.984	98.704	10.761	30.479	99.782
01-JR-MA-197-023	0.060	0.101	0.047	4.862	52.652	0.057	2.122	0.429	37.818	0.026	1.263	99.437	10.588	28.291	100.498
01-JR-MA-197-024	0.072	0.086	0.006	4.645	50.775	0.114	0.884	0.540	40.455	0.019	0.897	98.493	11.456	30.147	99.641
01-JR-MA-197-025	0.059	0.047	0.000	4.317	54.564	0.075	1.055	0.664	37.427	0.000	1.045	99.253	8.622	29.669	100.117
01-JR-MA-197-026	0.054	0.199	0.052	3.890	48.419	0.134	1.679	0.424	43.129	0.042	0.456	98.478	15.123	29.522	99.993
01-JR-MA-197-027	0.081	0.098	0.010	4.330	51.808	0.105	0.835	0.684	40.009	0.006	1.034	99.000	11.033	30.082	100.105
01-JR-MA-197-028	0.066	0.133	0.000	5.778	47.514	0.086	1.073	0.542	42.928	0.029	0.602	98.751	13.917	30.405	100.145
01-JR-MA-197-029	0.087	0.097	0.000	2.648	53.456	0.144	0.961	0.792	39.737	0.011	0.562	98.495	11.000	29.840	99.597
01-JR-MA-197-030	0.092	0.095	0.000	2.818	54.258	0.086	0.583	1.781	37.714	0.000	1.221	98.648	9.910	28.797	99.641
01-JR-MA-197-031	0.066	0.087	0.062	4.253	52.676	0.090	0.927	0.565	39.088	0.005	0.787	98.606	9.956	30.130	99.603
01-JR-MA-197-032	0.054	0.108	0.000	3.790	52.881	0.131	0.704	1.454	38.615	0.015	1.264	99.016	10.463	29.200	100.064
01-JR-MA-197-033	0.069	0.104	0.000	4.945	46.581	0.125	1.910	1.524	39.703	0.016	2.782	97.759	15.502	25.754	99.312
01-JR-MA-197-034	0.097	0.106	0.000	7.997	50.119	0.158	1.677	0.345	37.597	0.037	0.893	99.026	8.576	29.880	99.885
01-JR-MA-197-035	0.076	0.239	0.019	3.550	50.406	0.079	1.701	0.367	39.923	0.029	1.550	97.939	12.988	28.236	99.240
01-JR-MA-197-036	0.082	0.093	0.000	4.981	53.590	0.137	1.191	0.477	37.793	0.013	0.659	99.016	8.455	30.185	99.863
01-JR-MA-197-037	0.081	0.284	0.000	7.548	45.835	0.137	1.070	0.469	42.487	0.024	0.556	98.491	12.830	30.943	99.776
01-JR-MA-197-038	0.075	0.143	0.000	4.654	46.827	0.118	0.738	0.546	44.459	0.027	0.827	98.414	15.491	30.520	99.966
01-JR-MA-197-039	0.050	0.137	0.023	5.111	52.846	0.128	0.871	0.750	38.891	0.007	0.535	99.349	9.142	30.665	100.265
01-JR-MA-197-040	0.050	0.053	0.025	5.104	50.526	0.095	0.546	1.486	36.886	0.010	3.747	98.528	10.876	27.100	99.618
01-JR-MA-197-041	0.072	0.086	0.008	4.877	49.863	0.011	0.585	2.850	38.489	0.003	1.539	98.383	12.153	27.554	99.601
01-JR-MA-197-042	0.109	0.104	0.000	4.367	50.668	0.135	1.129	0.479	41.156	0.004	0.592	98.743	12.101	30.267	99.955
01-JR-MA-197-043	0.082	0.105	0.000	6.764	48.457	0.122	0.922	0.667	40.939	0.021	0.836	98.915	11.576	30.523	100.075
01-JR-MA-197-044	0.082	0.126	0.000	6.927	52.555	0.074	1.262	0.370	37.009	0.027	1.058	99.490	7.590	30.180	100.250
01-JR-MA-197-045	0.043	0.143	0.000	4.972	48.937	0.125	0.624	1.533	40.826	0.012	1.484	98.699	12.946	29.177	99.996
01-JR-MA-197-046	0.072	0.135	0.000	4.013	50.393	0.148	1.108	0.682	41.015	0.026	0.721	98.313	12.500	29.767	99.565

Sample	SiO2	TiO2	Nb2O5	Al2O3	Cr2O3	V2O3	MgO	MnO	FeO*	NiO	ZnO	Total	Fe2O3	FeO	Total
01-JR-MA-197-047	0.069	0.064	0.010	4.971	51.289	0.080	0.935	0.554	40.026	0.006	0.841	98.845	10.918	30.202	99.939
01-JR-MA-197-048	0.061	0.275	0.000	2.583	48.942	0.076	0.713	1.289	43.172	0.013	0.863	97.987	15.351	29.359	99.525
01-JR-MA-197-049	0.077	0.429	0.024	3.565	47.626	0.126	2.832	0.634	42.540	0.093	0.390	98.336	16.515	27.680	99.991
01-JR-MA-197-050	0.059	0.154	0.000	3.365	54.151	0.106	1.745	0.285	38.057	0.041	0.625	98.588	9.906	29.144	99.580
01-JR-MA-197-051	0.219	0.364	0.000	4.410	45.464	0.124	0.807	0.619	45.202	0.032	0.603	97.844	16.087	30.727	99.456
01-JR-MA-197-053	0.061	0.115	0.000	3.688	51.406	0.139	1.310	0.555	40.183	0.030	0.596	98.083	11.856	29.515	99.271
01-JR-MA-197-054	0.049	0.094	0.000	3.861	52.417	0.073	1.787	0.301	37.294	0.027	1.704	97.607	10.617	27.741	98.671
01-JR-MA-197-055	0.064	0.075	0.000	5.253	50.975	0.145	1.041	1.518	37.739	0.012	1.299	98.121	10.229	28.535	99.146
01-JR-MA-197-056	0.059	0.136	0.021	3.927	52.384	0.077	1.753	0.375	37.535	0.029	1.374	97.670	10.458	28.125	98.718
01-JR-MA-197-057	0.047	0.445	0.027	3.769	46.596	0.165	2.553	0.416	43.078	0.096	0.441	97.633	16.619	28.124	99.298
01-JR-MA-197-058	0.047	0.097	0.025	4.125	50.992	0.149	1.145	0.656	39.811	0.021	0.696	97.764	11.407	29.547	98.907
01-JR-MA-197-059	0.051	0.134	0.000	5.416	46.539	0.096	2.104	0.403	41.999	0.026	0.622	97.390	15.032	28.473	98.896
01-JR-MA-197-060	0.061	0.066	0.006	3.233	55.304	0.076	1.694	0.418	36.290	0.032	0.797	97.977	8.567	28.581	98.835
01-JR-MA-197-061	0.066	0.153	0.000	5.261	47.309	0.107	2.356	0.435	41.221	0.055	0.640	97.603	14.582	28.100	99.064
01-JR-MA-197-062	0.030	0.248	0.000	6.736	47.207	0.234	2.498	0.278	39.559	0.055	0.975	97.820	12.582	28.238	99.081
01-JR-MA-197-063	0.080	0.237	0.000	6.575	47.611	0.181	2.289	0.484	39.831	0.040	0.631	97.959	12.403	28.670	99.202
01-JR-MA-197-064	0.036	0.095	0.000	2.897	55.987	0.088	1.944	0.285	35.915	0.024	0.958	98.229	8.545	28.226	99.085
01-JR-MA-197-065	0.048	0.818	0.009	0.974	47.170	0.277	0.484	1.599	45.366	0.057	0.730	97.532	17.187	29.901	99.254
01-JR-MA-197-066	0.073	0.334	0.000	3.968	49.136	0.140	2.411	0.428	40.640	0.048	0.501	97.679	13.837	28.189	99.065
01-JR-MA-201-006	0.056	0.066	0.000	14.421	55.593	0.252	12.551	0.230	15.770	0.060	0.141	99.140	0.861	14.995	99.226
01-JR-MA-206-006	0.119	0.338	0.000	11.483	54.889	0.190	10.837	0.195	21.525	0.119	0.075	99.770	4.268	17.684	100.198
01-JR-MA-206-007	0.088	0.333	0.002	12.399	53.934	0.207	11.283	0.215	20.632	0.131	0.076	99.300	4.100	16.943	99.711
01-JR-MA-211-006	0.075	2.015	0.000	11.149	47.264	0.395	8.599	0.246	29.285	0.139	0.099	99.266	7.399	22.627	100.007
01-JR-MA-212-012	0.094	0.532	0.000	11.961	51.099	0.251	5.767	0.496	29.108	0.062	0.162	99.532	4.173	25.353	99.950
01-JR-MA-212-013	0.090	0.311	0.058	13.335	53.954	0.313	12.014	0.191	19.509	0.091	0.150	100.016	3.469	16.388	100.364
01-JR-MA-212-014	0.051	1.510	0.014	13.505	47.340	0.321	6.135	0.451	30.407	0.125	0.231	100.090	4.798	26.090	100.571
01-JR-MA-212-015	0.185	0.434	0.000	9.566	56.458	0.114	9.208	0.247	23.520	0.129	0.107	99.968	4.025	19.898	100.371
01-JR-MA-212-016	0.076	0.277	0.000	14.017	53.049	0.211	12.016	0.202	20.141	0.087	0.147	100.223	4.264	16.304	100.650
01-JR-MA-212-018	0.151	1.331	0.000	27.143	35.824	0.144	15.296	0.163	20.105	0.234	0.066	100.457	6.368	14.375	101.095
01-JR-MA-212-021	0.069	0.396	0.066	9.655	54.165	0.368	8.311	0.311	25.911	0.108	0.131	99.491	5.061	21.357	99.998
01-JR-MA-212-035	0.086	3.836	0.000	1.687	35.687	1.149	5.467	0.390	48.521	0.181	0.099	97.103	22.658	28.133	99.373
01-JR-MA-214-058	0.175	0.671	0.039	11.498	51.376	0.265	9.685	0.236	25.692	0.119	0.079	99.835	6.339	19.988	100.470
01-JR-MA-214-059	0.097	0.980	0.000	6.843	53.375	0.272	7.446	0.320	30.149	0.093	0.092	99.667	8.236	22.738	100.492
01-JR-MA-214-060	0.086	0.719	0.006	13.595	51.457	0.203	8.619	0.346	24.636	0.099	0.106	99.872	3.379	21.596	100.211
01-JR-MA-214-061	0.060	0.922	0.000	14.764	50.073	0.187	9.404	0.320	24.174	0.133	0.096	100.133	3.762	20.789	100.510
01-JR-MA-214-062	0.080	0.317	0.000	16.659	51.456	0.235	11.723	0.220	19.396	0.072	0.204	100.362	2.434	17.206	100.606
01-JR-MA-214-063	0.161	0.472	0.009	9.714	55.934	0.145	9.835	0.248	22.926	0.120	0.086	99.650	4.415	18.953	100.092
01-JR-MA-214-064	0.092	0.660	0.012	13.526	51.876	0.234	9.157	0.423	24.097	0.111	0.119	100.307	3.650	20.813	100.673
01-JR-MA-214-066	0.121	0.334	0.013	10.537	56.582	0.080	13.468	0.173	18.392	0.121	0.058	99.879	5.504	13.439	100.431
01-JR-MA-214-067	0.119	0.360	0.020	12.711	53.746	0.203	10.534	0.245	21.786	0.105	0.151	99.980	3.814	18.354	100.362
01-JR-MA-214-068	0.098	1.247	0.022	12.827	51.029	0.266	10.681	0.248	23.206	0.164	0.088	99.876	4.677	18.997	100.345
01-JR-MA-214-069	0.097	0.343	0.027	12.829	52.594	0.215	8.256	0.278	25.083	0.105	0.110	99.937	3.616	21.829	100.299
01-JR-MA-214-070	0.092	1.996	0.027	11.259	49.235	0.354	9.626	0.303	26.966	0.159	0.105	100.122	6.391	21.215	100.762
01-JR-MA-214-071	0.177	0.333	0.027	14.428	52.547	0.190	11.440	0.197	20.611	0.107	0.048	100.105	3.511	17.452	100.457
01-JR-MA-214-072	0.132	0.347	0.060	14.265	56.627	0.161	13.668	0.187	14.890	0.102	0.074	100.513	0.950	14.035	100.608
01-JR-MA-214-073	0.079	1.318	0.000	12.979	48.608	0.268	6.360	0.461	29.490	0.152	0.162	99.877	4.562	25.385	100.334

Sample	SiO2	TiO2	Nb2O5	Al2O3	Cr2O3	V2O3	MgO	MnO	FeO*	NiO	ZnO	Total	[illegible]	[illegible]	[illegible]
01-JR-MA-214-074	0.105	1.920	0.020	18.211	38.148	0.401	3.229	0.455	36.775	0.120	0.190	99.574	5.599	31.737	100.135
01-JR-MA-214-075	0.137	0.357	0.000	14.526	51.669	0.208	11.215	0.222	21.737	0.073	0.070	100.214	4.353	17.820	100.650
01-JR-MA-214-076	0.104	0.503	0.000	12.117	52.158	0.322	9.867	0.215	24.098	0.081	0.095	99.560	5.056	19.548	100.067
01-JR-MA-214-077	0.083	0.075	0.000	13.537	54.942	0.276	12.543	0.193	18.535	0.085	0.116	100.385	3.453	15.428	100.731
01-JR-MA-214-078	0.143	0.372	0.040	12.725	54.001	0.125	10.735	0.241	21.299	0.069	0.070	99.820	3.613	18.048	100.182
01-JR-MA-214-079	0.123	1.691	0.000	28.244	34.148	0.154	14.980	0.182	20.179	0.205	0.099	100.005	5.582	15.156	100.564
01-JR-MA-214-080	0.168	0.307	0.000	13.805	53.809	0.164	12.752	0.189	17.825	0.149	0.047	99.215	3.227	14.921	99.538
01-JR-MA-214-081	0.154	0.375	0.000	13.012	54.348	0.192	11.154	0.217	20.294	0.083	0.089	99.918	3.050	17.549	100.224
01-JR-MA-214-082	0.078	0.958	0.000	11.485	50.663	0.325	9.880	0.280	25.544	0.113	0.116	99.442	6.517	19.680	100.095
01-JR-MA-214-083	0.081	0.119	0.000	13.007	54.375	0.260	11.423	0.284	20.202	0.092	0.154	99.997	3.761	16.818	100.374
01-JR-MA-214-084	0.067	0.973	0.000	14.303	48.805	0.295	7.100	0.375	27.425	0.093	0.216	99.652	3.603	24.183	100.013
01-JR-MA-214-085	0.067	0.521	0.022	12.144	53.223	0.231	11.888	0.437	21.000	0.113	0.095	99.741	5.429	16.115	100.285
01-JR-MA-214-086	0.127	0.337	0.034	12.035	53.876	0.171	10.611	0.297	22.088	0.125	0.068	99.769	4.508	18.032	100.221
01-JR-MA-214-087	0.145	0.400	0.000	12.513	53.693	0.245	10.513	0.238	21.943	0.108	0.098	99.896	3.829	18.497	100.280
01-JR-MA-214-088	0.118	0.337	0.053	12.762	53.649	0.170	10.948	0.197	20.837	0.083	0.094	99.248	3.629	17.571	99.612
01-JR-MA-214-089	0.066	1.744	0.000	11.370	48.228	0.376	9.613	0.314	27.310	0.158	0.102	99.281	7.304	20.738	100.013
01-JR-MA-214-090	0.105	0.356	0.022	12.575	52.711	0.144	9.853	0.253	23.276	0.107	0.091	99.493	4.568	19.165	99.951
01-JR-MA-214-091	0.201	0.289	0.024	13.658	55.545	0.152	14.664	0.152	14.881	0.172	0.032	99.770	2.974	12.205	100.068
01-JR-MA-214-092	0.119	0.404	0.011	12.405	53.296	0.266	10.674	0.249	21.908	0.094	0.106	99.532	4.197	18.131	99.953
01-JR-MA-214-093	0.092	0.718	0.087	12.736	51.359	0.281	11.134	0.272	22.540	0.100	0.113	99.432	5.296	17.774	99.963
01-JR-MA-214-094	1.127	0.389	0.033	11.465	50.800	0.234	9.494	0.247	25.857	0.111	0.077	99.834	5.190	21.187	100.354
01-JR-MA-214-095	0.117	0.718	0.000	13.199	50.240	0.206	6.238	0.450	28.029	0.095	0.144	99.436	3.431	24.942	99.780
01-JR-MA-214-096	0.071	0.492	0.000	12.672	51.664	0.244	10.845	0.203	22.635	0.101	0.074	99.001	5.371	17.802	99.539
01-JR-MA-214-097	0.059	2.070	0.020	11.246	47.794	0.386	8.492	0.427	28.884	0.149	0.083	99.610	6.802	22.763	100.292
01-JR-MA-214-098	0.118	0.352	0.023	12.125	52.092	0.190	9.327	0.261	24.559	0.092	0.093	99.232	5.160	19.916	99.749
01-JR-MA-214-100	0.034	0.895	0.007	14.429	46.517	0.269	5.965	0.396	30.462	0.098	0.241	99.313	5.332	25.665	99.847
01-JR-MA-214-101	0.072	0.617	0.000	14.688	49.603	0.321	11.425	0.228	22.157	0.136	0.104	99.351	5.189	17.488	99.871
01-JR-MA-214-102	0.100	0.669	0.000	8.428	52.985	0.209	6.520	0.270	29.564	0.089	0.121	98.955	6.405	23.800	99.597
01-JR-MA-214-103	0.166	0.311	0.016	12.172	54.113	0.182	10.847	0.207	20.923	0.088	0.092	99.117	3.692	17.601	99.487
01-JR-MA-214-105	0.085	0.514	0.006	12.004	51.706	0.221	8.933	0.362	25.401	0.090	0.097	99.419	5.341	20.595	99.954
01-JR-MA-214-106	0.128	0.218	0.047	12.727	50.677	0.132	2.934	1.838	28.056	0.032	2.537	99.326	2.476	25.828	99.574
01-JR-MA-214-107	0.086	0.503	0.044	13.248	51.429	0.248	10.644	0.272	22.947	0.100	0.105	99.626	5.079	18.377	100.135
01-JR-MA-214-108	0.071	0.402	0.000	11.673	52.595	0.239	10.243	0.253	23.890	0.114	0.073	99.553	5.878	18.601	100.142
01-JR-MA-214-109	0.085	1.080	0.030	12.701	47.930	0.285	5.795	0.491	30.886	0.104	0.170	99.557	5.456	25.977	100.104
01-JR-MA-214-110	0.176	0.259	0.000	12.975	54.768	0.128	12.345	0.190	18.546	0.152	0.055	99.594	3.453	15.439	99.940
01-JR-MA-214-111	0.167	0.333	0.031	12.196	52.867	0.242	9.991	0.248	23.612	0.083	0.082	99.852	4.824	19.272	100.335
01-JR-MA-214-112	0.111	0.486	0.013	13.995	54.404	0.215	11.891	0.218	18.433	0.100	0.074	99.940	1.978	16.654	100.138
01-JR-MA-214-113	0.074	1.103	0.067	13.897	47.569	0.280	6.448	0.416	29.127	0.125	0.244	99.350	4.471	25.104	99.798
01-JR-MA-214-114	0.169	0.267	0.019	13.585	54.706	0.114	13.904	0.164	16.242	0.185	0.033	99.388	3.501	13.092	99.739
01-JR-MA-214-115	0.182	0.302	0.000	12.511	54.723	0.210	10.737	0.242	20.356	0.127	0.105	99.495	2.747	17.884	99.770
01-JR-MA-214-116	0.089	0.993	0.017	13.626	49.966	0.211	8.153	0.332	25.869	0.114	0.160	99.530	3.816	22.435	99.912
01-JR-MA-214-117	0.136	0.336	0.000	11.298	53.508	0.238	9.927	0.288	23.392	0.111	0.092	99.326	4.980	18.911	99.825
01-JR-MA-214-119	0.070	1.912	0.048	12.683	45.855	0.425	9.113	0.281	28.059	0.166	0.136	98.748	6.949	21.807	99.444
01-JR-MA-214-120	0.162	0.303	0.007	16.304	49.911	0.131	10.096	0.256	22.588	0.122	0.085	99.965	3.439	19.494	100.310
01-JR-MA-214-121	0.155	0.466	0.000	8.601	55.093	0.098	8.097	0.618	25.514	0.121	0.077	98.840	5.314	20.733	99.372
01-JR-MA-214-123	0.144	0.448	0.000	10.460	57.395	0.194	12.930	0.208	17.414	0.113	0.056	99.362	3.436	14.322	99.706

Sample	SiO_2	TiO_2	Nb_2O_5	Al_2O_3	Cr_2O_3	V_2O_3	MgO	MnO	FeO*	NiO	ZnO	Total	Fe_2O_3	FeO	Total
01-JR-MA-214-124	0.097	0.704	0.021	14.220	50.638	0.238	8.580	0.369	24.717	0.118	0.145	99.847	3.312	21.737	100.179
01-JR-MA-214-125	0.155	0.285	0.000	14.794	54.270	0.182	13.398	0.185	16.102	0.155	0.048	99.574	2.143	14.174	99.789
01-JR-MA-214-126	0.198	0.258	0.022	13.660	55.582	0.135	14.457	0.154	14.947	0.198	0.035	99.646	2.842	12.390	99.931
01-JR-MA-214-127	0.120	0.356	0.000	6.951	52.638	0.101	0.352	1.509	34.340	0.072	2.473	98.912	5.752	29.164	99.488
01-JR-MA-214-128	0.132	0.378	0.000	15.414	51.326	0.261	12.643	0.219	18.805	0.146	0.086	99.410	3.655	15.516	99.776
01-JR-MA-214-129	0.084	1.264	0.000	20.017	35.911	0.357	2.856	0.610	37.980	0.098	0.145	99.322	6.940	31.735	100.017
01-JR-MA-214-130	0.080	1.051	0.035	10.886	49.019	0.288	8.643	0.273	28.549	0.116	0.104	99.044	7.887	21.452	99.834
01-JR-MA-214-131	0.085	0.957	0.023	15.083	48.098	0.238	9.352	0.260	25.043	0.135	0.090	99.364	4.587	20.916	99.824
01-JR-MA-214-132	0.089	0.689	0.006	13.885	49.841	0.227	7.870	0.440	25.986	0.107	0.180	99.320	3.915	22.464	99.712
01-JR-MA-214-133	0.152	0.480	0.091	10.981	56.357	0.184	10.607	0.239	20.304	0.147	0.100	99.642	2.514	18.042	99.894
01-JR-MA-214-134	0.135	0.526	0.002	9.221	57.696	0.282	12.482	0.208	18.800	0.117	0.069	99.538	4.154	15.063	99.954
01-JR-MA-214-135	0.101	0.807	0.000	13.124	48.320	0.292	5.577	0.379	30.447	0.099	0.204	99.350	4.783	26.143	99.829
01-JR-MA-214-136	0.155	0.287	0.091	12.355	54.806	0.124	10.284	0.242	21.605	0.132	0.055	100.136	3.214	18.713	100.458
01-JR-MA-214-137	0.150	0.310	0.000	14.043	55.294	0.186	14.973	0.170	14.614	0.188	0.028	99.956	3.120	11.807	100.269
01-JR-MA-214-146	0.068	0.339	0.000	11.972	49.282	0.208	2.428	0.352	34.455	0.085	0.548	99.737	4.909	30.038	100.229
01-JR-MA-214-152	0.081	0.757	0.000	7.243	53.511	0.150	7.834	0.721	28.965	0.065	0.087	99.414	8.467	21.346	100.262
01-JR-MA-214-169	0.064	0.289	0.000	12.986	56.209	0.262	12.436	0.230	17.348	0.076	0.127	100.027	2.082	15.474	100.236
01-JR-MA-214-170	0.071	0.410	0.000	12.270	52.069	0.188	10.892	0.263	23.273	0.128	0.112	99.676	6.287	17.616	100.306
01-JR-MA-214-180	0.131	0.284	0.000	12.968	55.040	0.153	12.082	0.222	18.729	0.145	0.066	99.820	3.171	15.875	100.138
01-JR-MA-214-186	0.061	1.471	0.000	10.885	44.025	0.326	6.784	0.246	34.952	0.175	0.175	99.100	11.440	24.658	100.246
01-JR-MA-214-190	0.070	0.144	0.031	24.671	42.403	0.199	12.475	0.156	19.844	0.126	0.146	100.265	2.976	17.166	100.563
01-JR-MA-214-193	0.088	0.542	0.015	11.759	55.774	0.277	12.391	0.215	18.251	0.109	0.121	99.542	3.062	15.496	99.849
01-JR-MA-214-195	0.074	0.577	0.000	6.499	50.642	0.093	0.980	1.294	37.413	0.031	1.141	98.744	8.535	29.733	99.599
01-JR-MA-214-212	0.062	0.067	0.012	16.037	54.584	0.159	13.428	0.194	15.169	0.058	0.104	99.874	1.192	14.096	99.993
01-JR-MA-214-214	0.045	0.038	0.000	19.959	50.195	0.215	12.986	0.207	15.792	0.057	0.193	99.687	0.597	15.255	99.747
01-JR-MA-214-215	0.068	0.035	0.000	17.423	52.861	0.361	13.331	0.219	14.960	0.068	0.148	99.474	0.478	14.529	99.522
01-JR-MA-214-218	0.086	0.469	0.063	12.442	54.417	0.229	10.475	0.195	20.474	0.084	0.159	99.093	2.422	18.295	99.336
01-JR-MA-214-219	0.096	0.012	0.038	17.567	48.758	0.263	11.601	0.232	19.868	0.074	0.192	98.701	3.364	16.841	99.038
01-JR-MA-214-220	0.068	5.095	0.034	1.663	36.832	1.047	6.211	0.341	46.393	0.174	0.090	97.948	20.143	28.268	99.966
01-JR-MA-214-222	0.110	2.628	0.050	5.842	57.947	0.398	12.300	0.242	20.109	0.144	0.077	99.847	3.548	16.916	100.203
01-JR-MA-218-020	0.139	0.208	0.003	12.522	59.832	0.151	13.422	0.161	13.545	0.088	0.088	100.159	0.000	13.545	100.159
01-JR-MA-218-021	0.082	0.866	0.005	14.652	48.722	0.257	9.714	0.330	24.843	0.137	0.170	99.778	5.142	20.216	100.293
01-JR-MA-218-022	0.115	0.370	0.007	13.165	54.317	0.161	9.638	0.450	21.326	0.084	0.115	99.748	2.066	19.467	99.955
01-JR-MA-218-023	0.134	0.413	0.000	8.957	49.693	0.180	7.551	0.400	30.790	0.094	0.110	98.322	9.986	21.805	99.322
01-JR-MA-219-006	0.156	0.346	0.000	12.389	53.002	0.242	10.430	0.245	22.027	0.096	0.092	99.025	4.140	18.302	99.440
01-JR-MA-221-007	0.069	1.094	0.004	10.843	51.226	0.336	8.590	0.293	26.783	0.143	0.145	99.526	5.727	21.630	100.100
01-JR-MA-221-008	0.083	0.673	0.006	14.645	47.466	0.254	9.832	0.258	26.121	0.121	0.134	99.593	6.860	19.949	100.280
01-JR-MA-221-009	0.068	0.789	0.047	11.564	50.388	0.240	8.499	0.294	27.280	0.115	0.152	99.436	6.422	21.501	100.079
01-JR-MA-225-002	0.112	0.179	0.079	3.398	49.845	0.121	0.285	2.573	39.855	0.025	1.933	98.405	13.093	28.074	99.717
01-JR-MA-226-006	0.079	1.424	0.000	12.972	48.471	0.452	9.144	0.287	26.301	0.087	0.133	99.350	5.213	21.611	99.872
01-JR-MA-226-007	0.139	0.404	0.009	13.725	48.674	0.252	9.674	0.300	25.940	0.101	0.080	99.298	6.816	19.807	99.981
01-JR-MA-226-008	0.140	0.378	0.000	12.561	52.004	0.219	9.883	0.280	24.222	0.099	0.082	99.868	5.358	19.401	100.405
01-JR-MA-226-010	0.104	0.243	0.000	5.114	51.708	0.096	0.503	1.902	36.715	0.017	1.634	98.036	8.892	28.714	98.927
01-JR-MA-227-002	0.158	0.368	0.027	12.911	56.560	0.122	12.107	0.211	16.839	0.101	0.084	99.488	1.140	15.814	99.602
01-JR-MA-230-007	0.075	0.517	0.052	13.932	51.210	0.232	10.431	0.256	22.594	0.133	0.114	99.546	4.295	18.729	99.976
01-JR-MA-231-001	0.152	0.317	0.012	13.728	57.045	0.180	12.143	0.224	15.993	0.062	0.095	99.951	0.000	15.993	99.951

Sample	SiO_2	TiO_2	Nb_2O_5	Al_2O_3	Cr_2O_3	V_2O_5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe_2O_3	Fe#	Total
01-JR-MA-233-001	0.135	0.908	0.000	14.441	47.540	0.339	10.204	0.238	24.749	0.100	0.102	98.756	5.793	19.536	99.336
01-JR-MA-233-002	0.090	0.523	0.071	11.801	49.716	0.226	7.608	0.526	28.379	0.128	0.092	99.160	6.626	22.417	99.824
01-JR-MA-233-003	0.083	0.447	0.000	12.968	52.706	0.210	10.391	0.255	22.233	0.115	0.091	99.499	4.123	18.523	99.912
01-JR-MA-236-003	0.073	0.590	0.054	13.066	51.546	0.241	10.864	0.293	22.486	0.118	0.086	99.417	5.005	17.982	99.918
01-JR-MA-237-001	0.069	0.315	0.003	12.007	53.309	0.140	9.727	0.247	23.364	0.097	0.123	99.401	4.717	19.120	99.874
01-JR-MA-237-002	0.162	0.336	0.000	12.634	55.040	0.189	12.036	0.220	19.170	0.121	0.062	99.970	3.393	16.117	100.310
01-JR-MA-237-003	0.149	0.418	0.033	11.150	52.841	0.272	9.676	0.244	24.328	0.069	0.119	99.319	5.373	19.493	99.857
01-JR-MA-237-004	0.142	0.331	0.000	12.590	51.897	0.171	5.876	0.278	28.105	0.135	0.075	99.600	3.144	25.276	99.915
01-JR-MA-237-005	0.141	0.357	0.000	13.193	52.125	0.161	9.657	0.255	23.468	0.117	0.097	99.571	4.278	19.619	100.000
01-JR-MA-237-006	0.119	0.341	0.000	11.920	51.713	0.187	5.951	0.410	28.143	0.128	0.168	99.080	3.835	24.692	99.464
01-JR-MA-237-007	0.118	0.440	0.005	12.882	52.418	0.248	11.016	0.237	21.876	0.109	0.082	99.431	4.668	17.675	99.899
01-JR-MA-237-008	0.096	0.338	0.000	12.269	51.880	0.203	8.022	0.271	26.036	0.087	0.149	99.351	4.634	21.866	99.815
01-JR-MA-238-004	0.442	0.842	0.003	11.021	49.661	0.287	7.310	0.928	28.444	0.087	0.098	99.123	5.905	23.130	99.715
01-JR-MA-238-005	0.083	1.034	0.000	5.892	54.557	0.287	9.047	0.314	27.761	0.147	0.110	99.232	8.631	19.995	100.097
01-JR-MA-238-006	0.067	0.404	0.012	7.144	50.866	0.148	2.868	3.960	31.641	0.100	2.045	99.255	9.090	23.462	100.166
01-JR-MA-238-007	0.103	0.889	0.000	12.146	50.384	0.332	10.562	0.215	24.520	0.090	0.089	99.330	6.362	18.795	99.967
01-JR-MA-238-008	0.156	0.350	0.012	11.981	51.178	0.209	5.334	0.444	29.877	0.136	0.206	99.883	4.377	25.938	100.322
01-JR-MA-238-009	0.106	0.354	0.000	11.799	52.505	0.166	8.271	0.303	25.974	0.094	0.176	99.748	5.027	21.451	100.252
01-JR-MA-238-010	0.132	0.342	0.099	12.401	53.061	0.169	8.907	0.598	24.025	0.120	0.066	99.920	3.906	20.510	100.311
01-JR-MA-238-011	0.175	0.290	0.000	12.313	54.096	0.052	8.931	0.270	23.342	0.103	0.088	99.660	3.243	20.424	99.985
01-JR-MA-238-012	0.128	0.499	0.000	13.738	48.939	0.271	8.907	0.321	26.356	0.063	0.104	99.326	5.883	21.063	99.915
01-JR-MA-238-014	0.155	0.451	0.037	11.670	53.188	0.219	10.830	0.285	22.413	0.135	0.030	99.413	5.139	17.789	99.928
01-JR-MA-238-015	0.092	0.288	0.000	11.743	52.926	0.177	7.662	0.290	25.685	0.120	0.078	99.061	3.925	22.153	99.454
01-JR-MA-238-016	0.176	0.331	0.050	12.707	53.082	0.170	8.783	0.335	23.996	0.097	0.122	99.849	3.380	20.955	100.188
01-JR-MA-238-017	0.097	0.380	0.019	11.749	52.238	0.159	8.781	0.295	25.530	0.090	0.101	99.439	5.402	20.670	99.980
01-JR-MA-238-018	0.131	0.425	0.000	11.888	52.582	0.199	9.012	0.242	24.966	0.101	0.128	99.674	4.906	20.552	100.166
01-JR-MA-238-019	0.119	0.343	0.000	12.313	54.830	0.182	11.276	0.202	20.111	0.137	0.074	99.587	3.415	17.039	99.929
01-JR-MA-242-001	0.102	0.782	0.000	12.885	53.081	0.249	11.822	0.227	19.973	0.121	0.097	99.339	3.677	16.664	99.707
01-JR-MA-242-002	0.142	0.693	0.002	11.944	50.510	0.295	9.905	0.215	25.293	0.111	0.094	99.204	6.412	19.523	99.846
01-JR-MA-243-006	0.140	0.375	0.000	11.659	52.143	0.160	8.282	0.305	25.620	0.102	0.152	98.938	4.894	21.216	99.428
01-JR-MA-243-007	0.118	0.561	0.000	15.028	47.441	0.244	11.042	0.284	24.287	0.174	0.123	99.302	7.073	17.922	100.011
01-JR-MA-246-007	0.111	0.710	0.000	11.877	52.602	0.249	10.000	0.215	23.178	0.095	0.116	99.153	4.405	19.214	99.594
01-JR-MA-246-008	0.099	1.069	0.000	10.264	51.140	0.313	9.036	0.275	26.503	0.129	0.111	98.939	6.428	20.719	99.583
01-JR-MA-246-009	0.232	0.026	0.028	10.309	55.573	0.113	3.238	0.523	29.124	0.000	0.999	100.165	1.339	27.919	100.299
01-JR-MA-246-010	0.219	0.319	0.041	15.019	52.402	0.167	12.824	0.198	18.483	0.160	0.031	99.863	3.503	15.331	100.214
01-JR-MA-246-011	0.150	0.218	0.104	7.998	54.191	0.058	0.886	1.517	33.515	0.082	1.155	99.874	3.980	29.934	100.273
01-JR-MA-246-013	0.141	0.392	0.034	12.104	52.304	0.257	9.779	0.224	24.363	0.092	0.103	99.793	5.280	19.612	100.322
01-JR-MA-246-015	0.111	1.317	0.014	11.318	52.775	0.336	9.878	0.393	23.064	0.116	0.118	99.440	3.534	19.884	99.794
01-JR-MA-246-017	0.155	0.349		14.557	52.376	0.148	11.902	0.205	20.068	0.114	0.053	99.927	3.867	16.589	100.314
01-JR-MA-247-002	0.197	1.267	0.000	25.330	38.330	0.151	15.562	0.163	18.027	0.251	0.053	99.331	5.242	13.310	99.856
01-JR-MA-249-002	0.140	0.563	0.012	13.723	51.824	0.243	9.147	0.299	23.520	0.113	0.099	99.683	3.046	20.780	99.988
01-JR-MA-249-004	0.388	0.146	0.041	32.656	34.807	0.416	19.143	0.130	11.138	0.226	0.033	99.124	2.773	8.643	99.402
01-JR-MA-250-005	0.173	0.192	0.000	9.783	50.418	0.077	1.019	2.207	33.372	0.000	2.024	99.265	5.567	28.363	99.823
01-JR-MA-250-006	0.171	0.184	0.000	13.173	46.401	0.066	1.092	2.031	33.863	0.001	2.123	99.105	5.633	28.794	99.669
01-JR-MA-250-007	0.195	0.174	0.001	9.752	51.834	0.076	1.018	2.100	32.583	0.003	1.534	99.270	4.088	28.904	99.680
01-JR-MA-250-008	0.167	0.213	0.000	13.152	47.465	0.060	1.114	1.920	33.298	0.014	2.026	99.429	4.726	29.046	99.902

Sample	SiO2	TiO2	Nb2O5	Al2O3	Cr2O3	V2O5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe2O3	FeO	Total
01-JR-MA-250-009	0.158	0.177	0.012	11.495	49.849	0.073	1.494	2.034	31.876	0.000	2.427	99.595	4.563	27.771	100.052
01-JR-MA-250-010	0.180	0.128	0.034	11.749	48.223	0.087	0.811	1.926	34.543	0.019	1.942	99.642	5.656	29.454	100.209
01-JR-MA-250-011	0.155	0.177	0.025	11.959	49.291	0.132	1.022	2.099	33.349	0.000	1.671	99.880	4.404	29.386	100.321
01-JR-MA-250-012	0.143	0.144	0.047	11.472	48.503	0.080	0.795	2.191	34.710	0.000	1.330	99.415	5.630	29.644	99.979
01-JR-MA-250-013	0.168	0.179	0.035	12.436	48.567	0.099	1.414	1.637	33.562	0.001	1.393	99.491	4.584	29.437	99.950
01-JR-MA-250-014	0.169	0.171	0.000	12.389	49.096	0.047	1.191	2.082	32.422	0.012	2.039	99.618	4.213	28.631	100.040
01-JR-MA-250-016	0.145	0.148	0.012	10.092	51.442	0.087	1.149	1.993	32.070	0.003	2.440	99.581	4.438	28.076	100.026
01-JR-MA-250-017	0.168	0.185	0.056	12.998	48.100	0.105	1.459	1.803	32.823	0.000	1.885	99.582	4.362	28.898	100.019
01-JR-MA-250-018	0.172	0.154	0.000	10.015	51.682	0.076	0.883	2.041	32.866	0.001	1.451	99.341	4.004	29.263	99.742
01-JR-MA-250-019	0.182	0.173	0.004	12.268	48.789	0.098	1.414	1.914	32.697	0.018	1.880	99.437	4.520	28.629	99.890
01-JR-MA-250-020	0.173	0.176	0.000	11.488	49.847	0.109	1.276	2.032	32.268	0.002	1.787	99.158	4.069	28.607	99.566
01-JR-MA-250-021	0.165	0.172	0.000	12.198	48.362	0.095	1.380	2.060	33.274	0.000	1.746	99.452	5.141	28.648	99.967
01-JR-MA-250-022	0.212	0.191	0.000	13.373	47.249	0.099	1.538	1.855	32.729	0.018	1.826	99.090	4.517	28.665	99.543
01-JR-MA-250-023	0.134	0.187	0.000	10.538	48.927	0.111	1.097	1.943	34.175	0.005	1.685	98.802	5.982	28.792	99.401
01-JR-MA-250-024	0.140	0.646	0.000	8.233	51.654	0.137	1.015	1.073	35.470	0.137	0.757	99.262	5.241	30.754	99.787
01-JR-MA-250-025	0.172	0.196	0.000	13.228	47.843	0.042	1.044	2.062	32.805	0.000	2.119	99.511	4.304	28.932	99.942
01-JR-MA-250-026	0.188	0.164	0.000	12.287	48.599	0.113	1.124	2.044	33.054	0.010	1.984	99.567	4.595	28.920	100.027
01-JR-MA-250-027	0.183	0.183	0.000	12.530	48.481	0.109	1.199	1.911	32.513	0.000	2.279	99.388	4.285	28.657	99.817
01-JR-MA-250-028	0.184	0.139	0.028	9.264	50.579	0.068	0.899	2.016	34.278	0.000	1.797	99.252	6.033	28.850	99.856
01-JR-MA-250-029	0.179	0.188	0.030	12.872	48.380	0.077	0.927	2.121	33.637	0.012	1.665	100.088	4.404	29.674	100.529
01-JR-MA-250-032	0.194	0.145	0.006	11.944	49.053	0.078	0.994	2.029	32.831	0.017	1.503	98.794	4.035	29.200	99.198
01-JR-MA-250-033	0.176	0.128	0.000	11.031	48.050	0.116	0.820	2.056	34.737	0.000	1.692	98.806	6.162	29.192	99.423
01-JR-MA-250-034	0.177	0.197	0.000	13.560	47.333	0.049	1.266	2.023	32.690	0.026	1.790	99.111	4.267	28.851	99.538
01-JR-MA-250-035	0.160	0.209	0.017	13.360	46.942	0.093	1.024	2.033	33.239	0.031	1.608	98.716	4.387	29.291	99.156
01-JR-MA-250-036	0.177	0.193	0.000	11.204	49.697	0.064	1.238	1.946	32.250	0.000	2.230	98.999	4.492	28.208	99.449
01-JR-MA-251-001	0.116	0.346	0.000	27.599	31.699	0.183	6.067	1.452	31.622	0.181	0.173	99.438	6.217	26.028	100.061
01-JR-MA-253-025	0.185	0.276	0.000	13.530	55.710	0.118	14.469	0.153	14.897	0.191	0.026	99.555	2.897	12.290	99.845
01-JR-MA-253-027	0.096	1.977	0.012	19.692	39.625	0.193	13.442	0.207	23.970	0.139	0.097	99.450	8.449	16.368	100.296
01-JR-MA-253-028	0.099	0.327	0.000	13.903	50.590	0.176	10.478	0.250	23.031	0.116	0.105	99.075	5.289	18.272	99.605
01-JR-MA-253-029	0.076	0.436	0.023	23.408	41.236	0.208	12.936	0.294	21.042	0.156	0.155	99.970	5.265	16.305	100.497
01-JR-MA-253-030	0.082	0.910	0.000	15.064	47.180	0.262	10.342	0.271	25.147	0.144	0.084	99.486	6.364	19.420	100.124
01-JR-MA-253-031	0.134	0.307	0.000	11.566	53.431	0.167	9.768	0.297	23.789	0.073	0.137	99.669	5.148	19.157	100.185
01-JR-MA-253-033	0.106	1.165	0.000	13.429	48.061	0.368	9.959	0.250	26.192	0.058	0.114	99.702	6.521	20.324	100.355
01-JR-MA-253-035	0.165	0.322	0.000	13.496	51.467	0.212	9.201	0.264	24.327	0.137	0.080	99.671	4.294	20.463	100.101
01-JR-MA-253-036	0.129	0.339	0.000	12.597	52.400	0.148	9.263	0.210	24.215	0.113	0.085	99.499	4.553	20.118	99.955
01-JR-MA-253-037	0.150	0.275	0.035	7.780	56.238	0.071	4.891	1.194	28.392	0.117	0.655	99.798	4.318	24.506	100.231
01-JR-MA-253-038	0.159	0.685	0.000	13.580	52.291	0.212	12.005	0.264	20.511	0.150	0.068	99.925	4.365	16.584	100.362
01-JR-MA-253-039	0.095	0.924	0.000	13.601	51.120	0.256	10.682	0.288	22.826	0.132	0.077	100.001	4.448	18.824	100.447
01-JR-MA-253-041	0.087	0.614	0.000	13.583	50.600	0.198	8.833	0.303	25.278	0.091	0.071	99.658	4.539	21.194	100.113
01-JR-MA-253-042	0.177	0.334	0.000	13.816	54.147	0.139	12.949	0.169	17.532	0.164	0.051	99.478	3.144	14.703	99.793
01-JR-MA-253-043	0.142	0.392	0.000	14.148	48.747	0.198	8.346	0.259	27.044	0.083	0.087	99.446	5.729	21.889	100.020
01-JR-MA-253-044	0.155	0.338	0.000	14.607	53.655	0.145	13.917	0.177	16.817	0.141	0.043	99.995	3.657	13.527	100.361
01-JR-MA-253-045	0.075	0.862	0.000	15.464	49.117	0.185	8.421	0.383	25.116	0.145	0.125	99.893	3.264	22.179	100.220
01-JR-MA-253-046	0.075	0.335	0.034	11.671	53.161	0.180	10.131	0.264	23.604	0.109	0.099	99.663	5.498	18.656	100.214
01-JR-MA-253-047	0.191	0.281	0.004	13.121	56.487	0.105	14.583	0.159	14.586	0.203	0.050	99.770	2.791	12.074	100.050
01-JR-MA-253-048	0.066	1.310	0.011	14.492	46.491	0.261	6.088	0.418	29.868	0.125	0.217	99.347	4.451	25.863	99.793

Sample	SiO2	TiO2	Nb2O5	Al2O3	Cr2O3	V2O5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe2O3	FeO	Total
01-JR-MA-253-049	0.046	2.081	0.017	10.565	48.836	0.362	8.999	0.294	28.347	0.127	0.112	99.786	7.030	22.022	100.490
01-JR-MA-253-050	3.261	1.498	0.019	11.198	43.481	0.290	6.473	0.412	29.599	0.126	0.219	96.576	1.550	28.204	96.731
01-JR-MA-253-051	0.127	0.315	0.046	13.842	51.983	0.204	10.444	0.246	22.477	0.131	0.074	99.889	4.210	18.689	100.311
01-JR-MA-253-052	0.103	1.572	0.000	12.768	47.034	0.312	9.598	0.272	27.796	0.119	0.102	99.676	7.568	20.987	100.434
01-JR-MA-253-053	0.086	0.572	0.019	11.776	53.258	0.251	9.916	0.292	23.350	0.089	0.108	99.717	4.491	19.309	100.167
01-JR-MA-253-054	0.204	0.369	0.000	11.068	49.682	0.192	1.238	0.174	36.576	0.107	0.228	99.838	4.666	32.378	100.305
01-JR-MA-253-069	0.095	0.567	0.009	7.554	57.479	0.210	12.040	0.249	20.983	0.120	0.100	99.406	6.341	15.277	100.041
01-JR-MA-253-070	0.080	0.051	0.018	15.413	55.027	0.192	12.965	0.215	15.224	0.069	0.147	99.401	0.757	14.542	99.477
01-JR-MA-254-018	0.140	0.506	0.000	8.353	51.124	0.085	0.782	1.427	35.339	0.134	1.095	98.985	5.737	30.177	99.560
01-JR-MA-254-019	0.139	0.174	0.028	7.740	53.925	0.158	0.674	2.206	32.130	0.061	2.019	99.254	3.948	28.577	99.650
01-JR-MA-254-024	0.089	0.531	0.019	13.447	51.640	0.207	10.495	0.263	22.699	0.116	0.119	99.625	4.611	18.550	100.087
01-JR-MA-254-025	0.141	0.450	0.027	10.154	55.362	0.179	9.735	0.238	23.000	0.130	0.112	99.528	4.295	19.135	99.958
01-JR-MA-254-026	0.070	1.593	0.048	10.116	50.463	0.366	7.941	0.307	28.451	0.069	0.124	99.548	5.907	23.136	100.140
01-JR-MA-254-027	0.101	0.359	0.019	13.389	52.980	0.241	8.952	0.289	23.261	0.077	0.176	99.844	2.718	20.815	100.116
01-JR-MA-254-029	0.176	0.295	0.034	13.063	52.372	0.122	10.125	0.225	22.398	0.119	0.074	99.003	4.101	18.708	99.414
01-JR-MA-255-012	0.131	0.163	0.046	24.839	41.544	0.044	12.924	0.194	19.286	0.221	0.089	99.481	3.591	16.055	99.841
01-JR-SG-001-158	0.097	1.614	0.000	13.752	47.931	0.350	10.588	0.237	24.611	0.161	0.088	99.429	5.558	19.610	99.986
01-JR-SG-001-159	0.135	0.408	0.005	15.337	50.197	0.219	10.702	0.261	22.114	0.132	0.062	99.572	4.019	18.498	99.975
01-JR-SG-001-160	0.075	0.773	0.034	13.104	51.620	0.271	10.951	0.286	21.968	0.138	0.109	99.329	4.434	17.978	99.773
01-JR-SG-001-161	0.054	0.516	0.000	13.523	54.150	0.315	11.537	0.241	19.234	0.079	0.175	99.824	2.382	17.091	100.063
01-JR-SG-001-164	0.058	0.030	0.000	32.347	38.554	0.114	15.285	0.176	12.952	0.060	0.221	99.797	0.000	12.952	99.797
01-JR-SG-001-233	0.085	0.099	0.014	12.482	55.364	0.293	12.201	0.213	18.846	0.091	0.115	99.803	3.564	15.639	100.160
01-JR-SG-001-257	0.058	0.377	0.000	10.706	56.851	0.230	12.599	0.204	18.305	0.107	0.105	99.542	3.920	14.778	99.935
01-JR-SG-002-008	0.082	0.960	0.057	12.064	50.045	0.246	6.096	0.557	29.307	0.076	0.193	99.683	4.528	25.233	100.137
01-JR-SG-004-003	0.137	0.322	0.017	12.412	54.177	0.143	9.971	0.254	22.012	0.119	0.081	99.645	3.360	18.989	99.982
01-JR-SG-005-002	0.659	0.459	0.000	11.951	52.595	0.215	10.474	0.288	22.885	0.117	0.094	99.737	4.267	19.045	100.165
01-JR-SG-005-003	0.107	0.403	0.000	11.673	51.737	0.238	9.495	0.282	24.935	0.106	0.101	99.077	5.937	19.593	99.672
01-JR-SG-005-004	0.136	0.379	0.000	11.657	55.251	0.160	11.430	0.212	20.061	0.122	0.069	99.477	3.736	16.699	99.851
01-JR-SG-007-007	0.120	0.417	0.000	12.235	53.345	0.265	9.077	0.279	24.035	0.095	0.134	100.002	3.776	20.637	100.380
01-JR-SG-007-008	0.092	0.597	0.032	13.019	50.497	0.253	8.777	0.277	25.930	0.134	0.085	99.693	5.155	21.291	100.210
01-JR-SG-007-009	0.142	0.336	0.023	12.647	53.639	0.213	10.220	0.259	22.239	0.098	0.074	99.890	3.727	18.885	100.263
01-JR-SG-007-010	0.102	0.498	0.012	11.660	50.240	0.213	3.631	0.293	32.723	0.116	0.110	99.598	4.434	28.734	100.042
01-JR-SG-007-011	0.125	0.326	0.011	12.646	53.645	0.190	9.256	0.249	23.069	0.112	0.110	99.739	3.201	20.188	100.060
01-JR-SG-007-012	0.104	0.645	0.020	11.891	51.149	0.253	6.954	1.404	27.089	0.118	0.097	99.724	4.742	22.822	100.199
01-JR-SG-007-013	0.102	0.704	0.013	12.936	52.730	0.222	10.624	0.255	21.817	0.097	0.087	99.587	3.696	18.491	99.957
01-JR-SG-007-014	0.106	0.401	0.000	12.261	51.565	0.253	9.118	0.278	25.599	0.106	0.083	99.770	5.643	20.521	100.335
01-JR-SG-007-015	0.094	0.356	0.000	12.054	53.905	0.205	10.609	0.252	21.707	0.096	0.069	99.347	4.160	17.963	99.764
01-JR-SG-007-016	0.175	0.295	0.000	12.167	52.673	0.179	5.631	0.352	28.382	0.153	0.184	100.191	3.088	25.603	100.500
01-JR-SG-007-017	0.145	0.286	0.000	10.923	51.359	0.087	1.058	1.738	32.554	0.029	1.440	99.619	3.278	29.604	99.947
01-JR-SG-007-019	0.076	0.918	0.054	10.713	52.163	0.215	8.461	0.390	26.733	0.113	0.097	99.933	5.679	21.623	100.502
01-JR-SG-007-020	0.060	0.873	0.000	13.764	46.884	0.341	7.832	0.588	29.009	0.095	0.104	99.550	6.837	22.857	100.235
01-JR-SG-007-021	0.065	1.356	0.005	20.996	36.369	0.356	3.155	0.431	36.773	0.045	0.113	99.664	5.482	31.840	100.213
01-JR-SG-007-022	0.058	0.326	0.000	11.497	53.708	0.205	9.677	0.387	23.578	0.109	0.091	99.636	4.905	19.165	100.127
01-JR-SG-007-023	0.080	1.345	0.000	11.689	51.092	0.288	8.862	0.404	25.488	0.130	0.113	99.491	4.535	21.407	99.945
01-JR-SG-007-024	0.074	1.186	0.006	13.934	46.060	0.273	5.682	0.478	31.721	0.071	0.186	99.671	5.850	26.457	100.257
01-JR-SG-007-025	0.071	0.595	0.000	12.630	50.926	0.312	7.508	0.256	26.877	0.113	0.181	99.469	4.231	23.070	99.893

Sample	SiO2	TiO2	Nb2O5	Al2O3	Cr2O3	V2O5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe2O3	FeO	Total
01-JR-SG-007-026	0.144	0.299	0.000	12.677	54.355	0.143	11.309	0.203	20.347	0.137	0.080	99.694	3.708	17.010	100.066
01-JR-SG-007-027	0.093	0.397	0.036	11.349	52.868	0.266	8.256	0.485	25.684	0.105	0.141	99.680	4.732	21.426	100.154
01-JR-SG-007-030	0.085	0.406	0.000	12.193	52.977	0.174	10.449	0.223	22.615	0.104	0.080	99.306	4.878	18.225	99.795
01-JR-SG-008-005	0.085	0.341	0.013	11.036	54.437	0.162	10.193	0.284	23.147	0.122	0.069	99.889	5.172	18.493	100.407
01-JR-SG-008-006	0.139	0.787	0.021	11.434	51.772	0.253	9.596	0.268	24.942	0.101	0.088	99.401	5.537	19.960	99.956
01-JR-SG-008-007	0.083	1.019	0.047	15.309	49.708	0.286	11.514	0.229	21.341	0.129	0.102	99.767	3.786	17.934	100.146
01-JR-SG-009-008	0.093	0.371	0.020	11.868	52.259	0.220	9.756	0.261	24.308	0.097	0.089	99.342	5.578	19.289	99.901
01-JR-SG-010-018	0.192	1.127	0.000	30.418	34.256	0.122	16.676	0.172	16.382	0.239	0.044	99.628	4.511	12.323	100.080
01-JR-SG-010-019	0.090	0.400	0.009	11.429	53.291	0.218	8.917	0.289	24.428	0.107	0.101	99.279	4.450	20.424	99.725
01-JR-SG-011-013	0.109	0.315	0.028	11.907	55.078	0.145	11.216	0.238	20.597	0.145	0.077	99.855	3.947	17.046	100.250
01-JR-SG-012-011	0.028	1.490	0.013	12.888	46.011	0.353	8.807	0.805	28.315	0.122	0.102	98.934	7.745	21.346	99.710
01-JR-SG-012-012	0.093	0.565	0.027	11.920	51.618	0.234	9.784	0.264	25.471	0.128	0.080	100.184	6.396	19.716	100.825
01-JR-SG-012-016	0.089	0.835	0.018	12.685	51.086	0.270	10.695	0.260	23.340	0.128	0.077	99.483	5.388	18.492	100.023
01-JR-SG-012-017	0.061	0.870	0.014	11.464	49.400	0.254	9.236	0.274	27.072	0.102	0.091	98.838	7.497	20.326	99.589
01-JR-SG-012-018	0.089	0.245	0.003	5.099	49.362	0.158	0.409	1.619	40.963	0.024	0.742	98.713	11.847	30.303	99.900
01-JR-SG-012-019	0.087	0.436	0.000	11.211	54.525	0.306	10.740	0.240	21.687	0.107	0.071	99.410	4.241	17.871	99.835
01-JR-TM-002-005	0.075	1.202	0.000	13.638	46.791	0.288	6.003	0.399	30.530	0.101	0.269	99.296	5.261	25.796	99.823
01-JR-TM-004-005	0.131	0.381	0.028	13.984	51.768	0.154	10.562	0.220	21.691	0.133	0.091	99.143	3.810	18.263	99.525
01-JR-TM-004-006	0.080	0.719	0.000	11.991	50.877	0.341	9.828	0.257	25.176	0.097	0.085	99.451	6.070	19.714	100.059
01-JR-TM-004-007	0.115	0.266	0.000	7.791	52.330	0.124	0.776	0.366	37.572	0.025	0.503	99.868	6.278	31.923	100.497
01-JR-TM-004-008	0.058	1.113	0.000	11.631	48.071	0.320	7.898	0.270	29.805	0.099	0.142	99.407	7.728	22.852	100.181
01-JR-TM-004-009	0.076	0.904	0.000	15.197	48.888	0.261	8.468	0.385	25.333	0.128	0.089	99.729	3.458	22.221	100.076
01-JR-TM-005-030	0.134	0.255	0.016	9.646	52.685	0.121	1.035	0.700	34.660	0.018	0.626	99.896	3.660	31.367	100.263
01-JR-TM-005-031	0.200	0.271	0.000	13.180	55.822	0.172	12.761	0.199	17.480	0.117	0.080	100.282	2.586	15.153	100.541
01-JR-TM-006-006	0.163	0.298	0.028	13.530	52.572	0.113	9.133	0.231	23.672	0.148	0.091	99.979	3.504	20.520	100.330
01-JR-TM-006-007	0.111	1.402	0.073	29.644	34.120	0.191	16.215	0.120	17.243	0.222	0.079	99.420	4.497	13.197	99.871
01-JR-TM-006-008	0.110	0.268	0.033	14.659	52.644	0.123	6.862	0.403	24.538	0.038	0.429	100.107	0.910	23.719	100.198
01-JR-TM-006-009	0.091	0.811	0.012	12.728	55.131	0.361	7.863	0.168	18.843	0.134	0.163	96.305	0.000	18.843	96.305
01-JR-TM-007-008	0.143	0.299	0.039	15.810	50.784	0.188	11.145	0.244	21.130	0.139	0.068	99.989	3.565	17.922	100.346
01-JR-TM-007-009	0.156	0.317	0.000	13.610	54.359	0.152	12.614	0.197	18.014	0.183	0.034	99.636	3.148	15.181	99.951
01-JR-TM-007-010	0.128	1.597	0.000	12.340	52.579	0.175	13.898	0.160	18.210	0.177	0.044	99.308	4.547	14.119	99.764
01-JR-TM-008-003	0.057	0.014	0.028	12.279	57.070	0.153	8.405	1.356	20.424	0.065	0.245	100.096	0.584	19.898	100.155
01-JR-TM-008-004	0.081	1.667	0.000	12.384	47.697	0.290	9.733	0.276	27.166	0.132	0.059	99.485	7.189	20.697	100.205
01-JR-BD-001-013	0.169	0.295	0.008	15.003	52.073	0.118	11.727	0.191	20.080	0.130	0.065	99.859	3.624	16.819	100.222
01-JR-BD-001-014	0.087	0.383	0.023	13.786	56.993	0.113	12.878	0.194	15.340	0.097	0.101	99.995	0.564	14.833	100.051
01-JR-BD-001-015	0.152	0.369	0.049	14.895	51.127	0.225	10.933	0.205	21.967	0.122	0.070	100.114	4.024	18.346	100.517
01-JR-BD-001-016	0.067	0.995	0.041	13.870	46.415	0.239	5.894	0.397	31.061	0.093	0.254	99.326	5.837	25.809	99.911

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
KIMBERLITIC CHROME DIOPSIDES (According to ternary plot)											
01-JR-BD-001-010	54.106	0.010	0.631	0.744	15.092	24.153	0.222	4.568	0.611	0.000	100.137
01-JR-MA-001-006	54.493	0.056	1.211	0.232	15.072	23.628	0.146	4.465	0.919	0.000	100.222
01-JR-MA-001-007	54.681	0.046	1.311	0.517	14.643	23.311	0.251	4.955	0.984	0.000	100.699
01-JR-MA-001-008	54.747	0.051	1.279	0.418	14.876	23.101	0.198	4.672	1.006	0.002	100.350
01-JR-MA-001-010	54.444	0.040	1.054	0.595	15.228	23.435	0.138	4.192	0.934	0.000	100.060
01-JR-MA-001-011	53.765	0.000	2.099	0.283	14.519	22.867	0.208	5.159	1.139	0.001	100.040
01-JR-MA-001-012	54.051	0.065	1.849	0.610	14.626	22.694	0.196	4.358	1.314	0.000	99.763
01-JR-MA-001-013	54.130	0.017	1.289	0.417	15.145	23.624	0.182	4.467	0.939	0.000	100.210
01-JR-MA-001-014	54.392	0.054	1.075	0.694	15.410	23.486	0.102	3.547	0.928	0.000	99.688
01-JR-MA-001-015	54.194	0.028	1.559	0.628	14.561	22.673	0.192	4.661	1.194	0.000	99.690
01-JR-MA-001-016	54.034	0.044	1.218	0.616	14.709	23.115	0.180	4.564	1.067	0.000	99.547
01-JR-MA-002-003	54.576	0.036	1.522	0.434	14.814	23.182	0.236	4.849	0.907	0.000	100.556
01-JR-MA-002-004	53.823	0.010	1.492	0.371	14.786	22.928	0.197	4.599	1.090	0.001	99.297
01-JR-MA-002-005	54.264	0.051	1.091	0.684	15.216	23.013	0.174	4.314	1.021	0.000	99.828
01-JR-MA-002-006	53.875	0.071	0.717	0.589	15.252	23.732	0.185	4.114	0.734	0.004	99.273
01-JR-MA-002-007	54.765	0.096	1.843	0.207	15.142	23.086	0.171	4.292	1.078	0.000	100.680
01-JR-MA-002-008	54.521	0.012	1.680	0.329	15.222	23.453	0.131	3.993	0.941	0.000	100.282
01-JR-MA-002-009	54.428	0.030	1.649	0.228	15.092	23.498	0.195	4.537	0.952	0.000	100.609
01-JR-MA-002-010	53.550	0.035	1.620	0.518	14.527	23.188	0.224	4.689	1.046	0.000	99.397
01-JR-MA-002-011	54.541	0.009	1.555	0.596	14.730	23.014	0.189	4.495	1.191	0.000	100.320
01-JR-MA-002-012	54.834	0.023	1.571	0.571	14.713	22.680	0.231	5.231	1.189	0.000	101.043
01-JR-MA-002-013	54.312	0.070	1.238	0.715	15.408	23.592	0.146	3.750	0.968	0.000	100.199
01-JR-MA-002-014	53.938	0.017	2.525	0.224	13.482	21.687	0.258	6.196	1.672	0.000	99.999
01-JR-MA-002-015	54.383	0.042	1.568	0.367	14.790	23.034	0.185	4.760	1.081	0.000	100.210
01-JR-MA-002-016	54.148	0.009	1.657	0.335	14.737	23.169	0.195	4.926	0.996	0.000	100.172
01-JR-MA-002-017	54.499	0.026	1.732	0.437	15.208	23.042	0.151	3.856	1.201	0.000	100.152
01-JR-MA-002-018	54.518	0.041	1.663	0.520	14.805	23.007	0.239	4.781	1.052	0.000	100.626
01-JR-MA-002-019	54.415	0.016	1.716	0.527	15.378	23.628	0.123	3.625	1.068	0.000	100.496
01-JR-MA-002-020	54.521	0.016	1.484	0.176	15.434	23.254	0.175	4.025	1.031	0.000	100.116
01-JR-MA-002-021	54.404	0.014	1.915	0.314	14.608	22.673	0.177	4.424	1.408	0.000	99.937
01-JR-MA-002-022	54.546	0.015	1.207	0.661	15.124	22.489	0.229	5.175	1.136	0.002	100.584
01-JR-MA-002-023	54.010	0.031	1.621	0.756	15.072	22.903	0.137	4.473	0.946	0.024	99.973
01-JR-MA-002-024	54.769	0.024	1.779	0.220	14.927	22.955	0.213	4.579	1.203	0.002	100.671
01-JR-MA-002-025	53.806	0.021	1.244	0.301	14.885	23.485	0.213	4.761	0.758	0.001	99.475
01-JR-MA-002-027	54.190	0.046	1.543	0.382	14.727	23.239	0.239	5.179	1.064	0.000	100.609
01-JR-MA-002-028	54.808	0.042	1.513	0.388	15.266	23.174	0.155	4.290	1.046	0.000	100.682
01-JR-MA-002-029	55.121	0.056	1.011	0.466	15.066	23.574	0.183	4.241	1.025	0.001	100.744
01-JR-MA-002-030	54.628	0.000	1.559	0.216	14.663	23.033	0.219	4.961	1.112	0.000	100.391
01-JR-MA-002-031	54.955	0.007	1.398	0.310	15.079	23.076	0.239	4.373	1.033	0.003	100.473

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-002-032	53.654	0.031	1.744	0.423	14.896	23.058	0.175	4.498	1.192	0.000	99.671
01-JR-MA-002-033	53.871	0.042	1.846	0.212	14.455	22.834	0.224	5.198	1.193	0.000	99.875
01-JR-MA-002-034	54.344	0.027	2.279	0.524	14.497	22.405	0.158	4.207	1.604	0.000	100.045
01-JR-MA-002-035	53.802	0.092	1.268	0.567	15.072	23.502	0.159	4.019	0.877	0.000	99.358
01-JR-MA-002-037	54.368	0.062	0.967	0.943	15.476	23.847	0.134	3.265	0.892	0.000	99.954
01-JR-MA-002-038	54.254	0.010	1.695	0.390	14.304	22.593	0.253	4.989	1.147	0.003	99.638
01-JR-MA-002-039	54.781	0.043	1.667	0.214	14.597	22.640	0.303	4.748	1.171	0.000	100.164
01-JR-MA-002-040	54.801	0.082	1.191	0.911	14.684	22.999	0.138	4.150	1.117	0.000	100.073
01-JR-MA-002-041	54.049	0.077	2.395	0.254	13.859	22.498	0.218	5.093	1.313	0.001	99.757
01-JR-MA-002-042	54.233	0.049	1.522	0.518	14.745	23.700	0.180	4.442	0.867	0.000	100.256
01-JR-MA-002-043	53.878	0.066	1.381	0.505	14.485	22.802	0.178	5.106	1.268	0.001	99.670
01-JR-MA-003-008	55.012	0.021	1.295	0.319	15.022	23.324	0.181	4.328	1.030	0.003	100.535
01-JR-MA-003-009	54.401	0.038	1.080	0.298	15.666	23.863	0.131	3.625	0.816	0.004	99.922
01-JR-MA-003-010	53.723	0.069	1.763	0.398	14.791	23.699	0.207	4.607	0.963	0.003	100.223
01-JR-MA-003-011	54.511	0.044	0.969	0.771	15.275	23.115	0.193	4.308	1.001	0.000	100.187
01-JR-MA-003-012	54.132	0.030	1.173	0.340	15.193	23.340	0.164	4.369	1.018	0.001	99.760
01-JR-MA-003-013	54.276	0.012	1.515	0.228	14.988	23.299	0.145	4.618	1.098	0.001	100.180
01-JR-MA-003-014	54.145	0.026	1.178	0.263	15.006	23.693	0.166	4.497	0.830	0.000	99.804
01-JR-MA-003-015	54.269	0.054	2.409	0.541	13.910	21.974	0.226	5.317	1.470	0.001	100.171
01-JR-MA-003-016	54.672	0.059	1.543	0.521	14.989	22.943	0.158	4.084	1.195	0.001	100.165
01-JR-MA-003-017	54.241	0.021	1.469	0.193	14.762	23.183	0.242	5.158	0.963	0.002	100.234
01-JR-MA-003-018	54.995	0.082	1.017	0.185	15.859	24.011	0.127	3.467	0.694	0.000	100.437
01-JR-MA-003-019	54.328	0.013	1.006	0.270	15.575	23.943	0.186	4.178	0.759	0.003	100.261
01-JR-MA-004-001	54.611	0.043	1.567	0.229	15.007	23.287	0.193	4.662	1.037	0.000	100.636
01-JR-MA-004-003	54.335	0.055	1.393	0.305	15.192	23.386	0.184	4.484	0.938	0.000	100.272
01-JR-MA-004-004	53.981	0.019	1.847	0.479	14.801	22.707	0.229	4.913	1.333	0.004	100.313
01-JR-MA-004-005	54.000	0.026	1.301	0.309	14.646	22.986	0.238	5.562	1.042	0.001	100.111
01-JR-MA-004-006	53.890	0.044	0.918	0.518	15.966	23.652	0.174	4.017	0.730	0.010	99.919
01-JR-MA-004-007	53.810	0.065	1.353	0.611	15.224	23.454	0.191	4.256	1.017	0.000	99.981
01-JR-MA-004-008	54.562	0.046	2.333	0.353	14.440	22.790	0.185	4.908	1.257	0.006	100.880
01-JR-MA-004-009	54.312	0.020	1.184	0.669	15.058	23.227	0.148	4.475	1.203	0.000	100.296
01-JR-MA-004-010	54.047	0.022	1.491	0.259	15.339	23.758	0.185	4.401	0.852	0.000	100.354
01-JR-MA-004-011	54.038	0.047	1.454	0.292	15.149	23.530	0.188	4.389	0.862	0.000	99.949
01-JR-MA-004-012	54.230	0.014	1.447	0.178	15.001	23.399	0.204	4.857	0.922	0.000	100.252
01-JR-MA-005-001	53.861	0.047	1.300	0.446	15.085	23.506	0.189	4.694	0.869	0.000	99.997
01-JR-MA-005-002	53.900	0.057	1.927	0.276	15.019	23.101	0.173	4.376	1.091	0.000	99.920
01-JR-MA-005-003	55.509	0.038	1.089	0.516	15.332	23.401	0.181	4.175	0.968	0.004	101.213
01-JR-MA-005-004	54.232	0.080	1.397	0.313	15.269	23.428	0.213	4.774	0.921	0.003	100.630
01-JR-MA-005-006	53.736	0.085	1.283	0.881	14.927	23.540	0.226	4.430	1.036	0.000	100.144
01-JR-MA-005-007	54.541	0.064	1.688	0.717	14.806	22.957	0.210	4.417	1.185	0.000	100.585

Sample	SiO_2	TiO_2	Al_2O_3	Cr_2O_3	MgO	CaO	MnO	FeO	Na_2O	K_2O	Total
01-JR-MA-005-008	53.070	0.057	1.553	0.406	14.631	23.263	0.216	5.207	0.881	0.000	99.284
01-JR-MA-005-009	53.811	0.020	1.563	0.338	15.052	23.236	0.165	4.188	1.047	0.003	99.423
01-JR-MA-005-010	54.303	0.019	2.108	0.343	14.565	22.708	0.209	4.837	1.281	0.000	100.373
01-JR-MA-005-011	54.791	0.070	1.332	0.526	15.411	23.553	0.164	3.886	0.972	0.000	100.705
01-JR-MA-005-012	54.427	0.084	1.281	0.874	15.686	23.498	0.136	3.376	1.013	0.000	100.355
01-JR-MA-005-013	54.418	0.015	1.068	0.601	14.771	23.660	0.212	4.730	1.001	0.006	100.482
01-JR-MA-005-014	53.976	0.084	1.520	0.466	14.840	23.264	0.153	4.535	1.031	0.000	99.869
01-JR-MA-005-016	54.669	0.054	1.857	0.441	15.292	23.092	0.115	3.577	1.161	0.003	100.261
01-JR-MA-005-017	54.905	0.057	1.211	0.584	15.149	23.829	0.183	3.747	0.861	0.001	100.532
01-JR-MA-005-018	54.528	0.069	1.222	0.431	14.603	23.415	0.253	5.040	0.869	0.000	100.430
01-JR-MA-005-019	54.221	0.072	2.300	0.471	14.519	22.583	0.172	4.737	1.284	0.003	100.362
01-JR-MA-005-020	53.617	0.016	2.036	0.432	14.665	23.012	0.241	5.035	1.164	0.000	100.218
01-JR-MA-005-021	53.982	0.087	1.546	0.502	14.944	23.570	0.164	4.551	0.921	0.004	100.271
01-JR-MA-006-001	54.523	0.063	1.214	0.731	14.929	23.140	0.175	4.698	1.065	0.000	100.538
01-JR-MA-006-002	55.502	0.009	0.578	0.242	16.232	24.197	0.148	3.890	0.464	0.000	101.262
01-JR-MA-007-001	54.555	0.075	1.476	0.704	15.212	23.482	0.160	3.855	1.080	0.000	100.599
01-JR-MA-007-003	55.052	0.027	1.336	0.498	15.491	24.077	0.166	3.606	0.871	0.000	101.124
01-JR-MA-007-005	54.549	0.066	1.792	1.052	14.524	22.237	0.183	4.638	1.472	0.000	100.513
01-JR-MA-007-006	55.022	0.093	1.814	0.591	14.774	22.812	0.168	4.592	1.385	0.001	101.252
01-JR-MA-007-007	53.924	0.033	1.358	0.472	15.429	23.115	0.173	4.379	1.078	0.000	99.961
01-JR-MA-008-001	54.461	0.043	1.925	0.720	14.991	23.113	0.133	3.787	1.297	0.000	100.470
01-JR-MA-008-003	54.070	0.052	1.384	0.470	15.095	22.855	0.137	4.283	1.232	0.001	99.579
01-JR-MA-008-004	53.824	0.019	2.307	0.392	14.858	23.041	0.128	4.109	1.308	0.002	99.988
01-JR-MA-008-005	53.955	0.005	0.963	0.714	15.321	22.961	0.201	4.196	1.123	0.000	99.439
01-JR-MA-008-006	54.613	0.046	1.055	0.355	15.410	24.072	0.150	3.969	0.785	0.002	100.457
01-JR-MA-008-007	54.164	0.061	1.356	0.517	15.114	23.234	0.171	4.209	1.049	0.002	99.877
01-JR-MA-008-009	54.070	0.057	1.668	0.467	14.311	22.782	0.236	5.102	1.106	0.004	99.803
01-JR-MA-009-001	54.554	0.020	1.388	0.390	14.799	23.015	0.185	5.217	1.011	0.000	100.579
01-JR-MA-009-002	54.680	0.034	1.402	0.757	15.311	23.208	0.170	3.989	1.126	0.000	100.677
01-JR-MA-010-002	54.151	0.080	1.592	0.298	14.868	23.425	0.154	4.697	1.068	0.001	100.334
01-JR-MA-010-003	53.646	0.054	1.964	0.421	14.607	22.721	0.231	4.669	1.412	0.000	99.725
01-JR-MA-010-004	54.579	0.033	1.018	0.841	15.962	23.713	0.129	3.277	0.905	0.002	100.459
01-JR-MA-010-005	53.695	0.064	1.567	0.509	15.279	23.498	0.166	3.859	1.085	0.000	99.722
01-JR-MA-010-006	53.492	0.062	1.670	0.865	14.856	23.192	0.146	4.013	1.240	0.001	99.537
01-JR-MA-010-007	54.195	0.063	1.100	0.581	15.158	23.610	0.201	4.408	0.918	0.000	100.234
01-JR-MA-010-008	53.902	0.000	2.021	0.473	14.613	22.748	0.193	4.815	1.217	0.000	99.982
01-JR-MA-010-009	54.155	0.032	1.433	0.376	15.455	23.875	0.166	3.984	0.858	0.000	100.334
01-JR-MA-010-010	53.890	0.030	1.298	0.461	15.443	23.250	0.168	4.105	1.049	0.000	99.694
01-JR-MA-010-011	54.387	0.043	0.993	0.763	15.178	23.520	0.191	4.515	0.948	0.000	100.538
01-JR-MA-010-012	53.852	0.062	1.445	0.417	14.882	23.248	0.186	4.641	1.073	0.001	99.807

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-010-013	54.805	0.059	1.560	0.408	15.020	22.866	0.186	4.505	1.266	0.000	100.675
01-JR-MA-010-014	54.215	0.034	1.961	0.532	14.535	22.727	0.214	4.523	1.353	0.000	100.094
01-JR-MA-010-015	54.515	0.000	1.570	0.518	15.357	23.506	0.167	3.592	1.048	0.000	100.273
01-JR-MA-010-016	54.140	0.041	1.706	0.517	14.324	22.902	0.209	5.137	1.204	0.003	100.183
01-JR-MA-010-017	54.990	0.048	1.099	0.555	15.879	23.884	0.118	3.260	0.824	0.000	100.657
01-JR-MA-010-018	54.334	0.037	1.901	0.626	14.805	22.763	0.164	4.237	1.382	0.000	100.249
01-JR-MA-010-019	54.495	0.008	1.409	0.333	15.269	23.672	0.161	4.175	0.938	0.005	100.465
01-JR-MA-010-020	53.850	0.069	1.175	0.668	15.428	23.312	0.124	3.912	0.915	0.000	99.453
01-JR-MA-010-021	54.964	0.042	0.973	0.497	15.624	23.515	0.173	4.029	0.857	0.001	100.675
01-JR-MA-010-022	54.628	0.066	1.137	0.647	15.011	22.706	0.184	4.537	1.197	0.000	100.113
01-JR-MA-010-024	54.592	0.053	1.477	0.260	15.557	23.465	0.157	3.658	0.974	0.000	100.193
01-JR-MA-010-025	54.280	0.024	1.424	0.384	14.514	22.669	0.220	5.510	1.119	0.000	100.144
01-JR-MA-010-026	54.751	0.068	1.039	1.109	15.897	23.654	0.125	3.219	0.820	0.000	100.682
01-JR-MA-010-027	54.596	0.000	1.561	0.480	15.055	23.523	0.180	4.448	0.994	0.000	100.837
01-JR-MA-010-028	53.819	0.050	1.447	0.612	14.342	22.674	0.270	5.892	1.140	0.002	100.248
01-JR-MA-010-029	54.540	0.038	2.073	0.297	14.809	23.019	0.184	4.272	1.241	0.002	100.475
01-JR-MA-010-030	53.941	0.024	1.554	0.473	14.814	23.262	0.186	4.472	1.113	0.000	99.839
01-JR-MA-011-002	54.234	0.024	2.102	0.551	14.423	22.486	0.191	4.720	1.274	0.002	100.007
01-JR-MA-011-003	54.077	0.038	1.706	0.503	14.908	22.863	0.194	4.850	1.067	0.000	100.206
01-JR-MA-011-004	54.508	0.020	1.680	0.444	15.351	23.584	0.152	3.798	0.893	0.006	100.436
01-JR-MA-011-005	54.676	0.026	1.258	0.402	15.444	23.443	0.154	4.156	0.981	0.001	100.541
01-JR-MA-012-002	54.553	0.010	1.925	0.392	14.595	23.462	0.238	4.239	1.103	0.002	100.519
01-JR-MA-012-005	54.236	0.018	1.753	0.327	15.002	23.090	0.182	4.504	1.145	0.007	100.264
01-JR-MA-014-002	54.209	0.023	1.570	1.397	14.219	22.537	0.187	4.510	1.475	0.002	100.129
01-JR-MA-014-003	54.118	0.041	1.857	0.346	14.451	23.267	0.274	5.164	1.006	0.000	100.524
01-JR-MA-014-004	54.129	0.019	1.999	0.352	14.554	22.708	0.194	5.013	1.203	0.000	100.171
01-JR-MA-014-005	53.820	0.012	1.398	0.245	14.936	23.227	0.175	4.681	1.003	0.005	99.502
01-JR-MA-014-007	55.362	0.125	3.219	0.830	15.509	20.806	0.067	2.366	1.921	0.004	100.209
01-JR-MA-014-007	55.491	0.043	1.184	0.396	15.786	23.619	0.125	3.658	0.832	0.008	101.142
01-JR-MA-014-008	55.383	0.046	1.446	1.157	17.066	22.399	0.092	1.870	1.101	0.003	100.563
01-JR-MA-014-008	54.286	0.012	1.869	0.321	15.208	23.606	0.144	4.073	1.153	0.000	100.672
01-JR-MA-014-009	54.258	0.053	2.377	1.426	14.281	22.592	0.162	3.893	1.410	0.002	100.454
01-JR-MA-014-010	54.976	0.169	0.568	1.454	16.975	23.101	0.068	1.771	1.067	0.000	100.149
01-JR-MA-014-010	54.691	0.062	1.279	0.643	15.162	23.639	0.146	4.031	0.983	0.000	100.636
01-JR-MA-014-011	54.676	0.003	2.205	0.448	15.147	22.899	0.139	4.272	1.310	0.000	101.099
01-JR-MA-014-012	55.200	0.138	2.393	1.240	16.516	20.523	0.072	2.516	1.841	0.012	100.451
01-JR-MA-014-012	54.414	0.038	1.325	0.264	15.189	23.361	0.179	4.519	0.960	0.000	100.249
01-JR-MA-014-013	53.770	0.044	1.319	0.511	15.182	23.575	0.176	4.299	0.951	0.003	99.830
01-JR-MA-014-014	54.929	0.006	1.373	0.994	17.091	23.349	0.062	1.366	0.956	0.005	100.131
01-JR-MA-014-014	54.832	0.043	1.609	0.476	15.477	23.101	0.126	3.777	1.177	0.002	100.620

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-014-016	54.562	0.043	1.486	0.409	15.235	23.187	0.161	4.228	1.112	0.000	100.423
01-JR-MA-014-017	54.134	0.006	1.641	0.243	14.931	23.077	0.213	5.022	1.063	0.000	100.330
01-JR-MA-014-018	54.283	0.012	1.257	0.819	14.923	23.498	0.222	4.708	0.979	0.000	100.701
01-JR-MA-014-019	54.340	0.024	1.637	0.319	14.746	22.676	0.198	4.952	1.179	0.000	100.071
01-JR-MA-014-020	54.501	0.033	1.529	0.291	14.912	23.199	0.194	4.763	1.171	0.000	100.593
01-JR-MA-014-021	54.208	0.057	1.489	0.635	14.990	23.212	0.190	4.434	1.124	0.002	100.341
01-JR-MA-014-023	54.507	0.027	1.581	0.128	14.834	23.470	0.217	4.791	0.968	0.005	100.528
01-JR-MA-014-024	54.994	0.056	1.584	0.549	15.074	23.214	0.166	4.236	1.091	0.002	100.966
01-JR-MA-014-025	54.361	0.033	1.590	0.496	14.872	23.144	0.190	4.620	1.048	0.000	100.354
01-JR-MA-014-026	54.385	0.036	1.496	0.301	15.065	23.505	0.154	4.206	0.985	0.002	100.135
01-JR-MA-014-027	55.349	0.018	0.536	0.293	16.128	24.296	0.145	3.858	0.551	0.000	101.174
01-JR-MA-014-028	54.273	0.057	0.811	0.420	15.494	23.563	0.170	4.143	0.703	0.007	99.641
01-JR-MA-014-029	54.013	0.057	2.047	0.303	14.889	23.314	0.153	4.143	1.134	0.000	100.053
01-JR-MA-014-031	53.891	0.015	1.329	0.438	15.021	23.501	0.174	4.520	0.906	0.000	99.795
01-JR-MA-014-032	54.228	0.071	1.979	0.404	14.934	23.077	0.174	4.297	1.118	0.000	100.282
01-JR-MA-015-005	54.977	0.020	1.354	0.336	15.092	23.217	0.163	4.333	1.067	0.000	100.559
01-JR-MA-015-007	54.832	0.030	1.277	0.195	15.225	23.909	0.173	4.483	0.744	0.000	100.868
01-JR-MA-015-008	54.343	0.012	1.138	0.204	15.541	23.995	0.175	4.137	0.782	0.000	100.327
01-JR-MA-015-009	54.559	0.043	1.577	0.427	15.129	23.586	0.198	4.145	0.923	0.000	100.587
01-JR-MA-015-010	55.044	0.017	1.896	0.416	15.170	23.085	0.118	3.866	1.256	0.003	100.871
01-JR-MA-015-012	54.119	0.014	1.437	1.021	14.642	23.665	0.258	4.478	0.867	0.000	100.501
01-JR-MA-015-013	54.603	0.030	1.620	0.792	15.085	23.203	0.153	3.846	1.247	0.000	100.579
01-JR-MA-015-015	54.048	0.038	1.836	0.479	14.660	23.045	0.207	4.941	1.109	0.000	100.363
01-JR-MA-016-001	54.252	0.044	1.338	0.482	15.374	23.726	0.128	3.829	0.998	0.000	100.171
01-JR-MA-016-002	54.066	0.028	1.231	0.793	15.043	23.474	0.181	4.128	1.064	0.000	100.008
01-JR-MA-016-003	54.584	0.092	2.224	0.506	14.423	22.767	0.153	4.551	1.466	0.003	100.769
01-JR-MA-016-004	54.142	0.071	1.474	0.314	15.088	23.555	0.177	3.839	1.119	0.001	99.780
01-JR-MA-016-005	54.208	0.015	1.656	0.551	14.951	23.327	0.157	4.374	1.136	0.000	100.375
01-JR-MA-016-006	54.692	0.078	1.443	0.637	15.347	23.521	0.118	3.584	1.066	0.000	100.486
01-JR-MA-016-008	54.004	0.066	1.495	0.375	14.852	23.632	0.207	4.623	1.027	0.000	100.281
01-JR-MA-016-009	53.970	0.036	1.910	0.438	14.620	22.926	0.162	4.813	1.192	0.000	100.067
01-JR-MA-016-010	54.231	0.047	1.912	0.495	14.957	22.859	0.184	4.171	1.213	0.000	100.069
01-JR-MA-016-011	54.003	0.070	1.331	0.521	15.682	24.053	0.134	3.583	0.845	0.000	100.222
01-JR-MA-016-013	54.082	0.003	1.566	0.531	14.937	22.608	0.219	4.615	1.300	0.000	99.861
01-JR-MA-017-001	54.633	0.064	1.771	0.383	14.613	22.817	0.155	4.921	1.181	0.000	100.538
01-JR-MA-017-002	54.230	0.006	1.395	0.373	15.388	23.666	0.164	3.840	0.898	0.004	99.964
01-JR-MA-017-003	54.943	0.018	1.451	0.623	15.478	23.510	0.139	3.499	1.146	0.000	100.807
01-JR-MA-017-004	53.713	0.030	1.941	0.235	14.306	22.740	0.231	5.364	1.089	0.000	99.649
01-JR-MA-017-005	54.439	0.066	1.891	0.533	14.414	22.323	0.165	4.861	1.396	0.001	100.089
01-JR-MA-017-006	54.049	0.047	1.171	0.409	15.181	23.310	0.183	4.797	0.957	0.000	100.104

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-017-008	54.092	0.027	0.644	0.514	15.688	23.775	0.158	4.127	0.688	0.000	99.713
01-JR-MA-017-009	54.257	0.034	2.070	0.485	14.872	22.730	0.165	4.132	1.426	0.000	100.171
01-JR-MA-017-010	54.566	0.091	1.284	0.472	15.348	23.125	0.157	4.139	1.137	0.000	100.319
01-JR-MA-018-002	55.032	0.000	1.747	0.610	15.071	23.056	0.172	4.409	1.194	0.000	101.291
01-JR-MA-018-003	53.595	0.066	2.868	0.738	13.869	21.952	0.181	4.502	1.874	0.000	99.645
01-JR-MA-018-006	54.174	0.017	1.905	0.955	14.493	22.826	0.137	4.126	1.326	0.000	99.959
01-JR-MA-018-007	54.301	0.000	0.867	0.371	15.564	24.216	0.258	3.919	0.637	0.005	100.138
01-JR-MA-018-008	53.950	0.012	1.983	0.337	14.393	22.633	0.215	5.375	1.408	0.000	100.306
01-JR-MA-019-001	54.435	0.026	2.100	0.456	14.350	22.545	0.202	4.807	1.467	0.001	100.389
01-JR-MA-019-002	54.635	0.058	1.699	0.534	15.081	22.951	0.187	4.162	1.165	0.000	100.472
01-JR-MA-019-003	54.512	0.023	1.649	0.429	14.610	23.023	0.225	5.080	1.246	0.003	100.800
01-JR-MA-019-004	54.144	0.058	1.058	0.507	15.375	23.406	0.167	4.470	0.889	0.000	100.074
01-JR-MA-020-002	53.775	0.040	1.668	0.628	14.191	22.732	0.215	4.977	1.334	0.003	99.563
01-JR-MA-020-003	54.798	0.037	1.374	0.429	14.857	23.065	0.172	4.387	1.110	0.000	100.229
01-JR-MA-020-004	54.348	0.029	0.938	0.777	14.924	23.309	0.210	4.649	0.993	0.000	100.177
01-JR-MA-020-005	54.511	0.020	1.630	0.564	14.563	22.408	0.193	4.595	1.354	0.005	99.843
01-JR-MA-021-002	54.463	0.049	1.944	0.329	14.680	23.009	0.154	4.304	1.146	0.000	100.078
01-JR-MA-021-003	54.595	0.012	1.328	0.539	15.320	23.835	0.139	3.552	0.902	0.000	100.222
01-JR-MA-021-004	54.371	0.029	0.820	0.572	15.292	23.896	0.184	4.165	0.749	0.000	100.080
01-JR-MA-021-005	54.209	0.038	1.196	0.342	14.794	23.564	0.205	4.594	0.955	0.000	99.897
01-JR-MA-023-001	54.184	0.027	1.373	0.801	14.937	23.563	0.131	3.833	1.027	0.000	99.876
01-JR-MA-023-002	53.964	0.062	1.642	0.369	15.252	23.229	0.110	3.913	1.110	0.000	99.651
01-JR-MA-023-003	54.245	0.026	1.382	1.237	14.364	22.532	0.289	4.810	1.320	0.000	100.205
01-JR-MA-023-004	54.706	0.026	1.374	0.372	14.908	23.272	0.191	4.631	0.936	0.000	100.416
01-JR-MA-023-005	53.941	0.009	1.732	0.555	14.768	23.221	0.179	4.087	1.169	0.000	99.661
01-JR-MA-023-006	54.612	0.033	1.652	0.840	14.353	22.385	0.196	4.892	1.331	0.004	100.298
01-JR-MA-023-007	54.123	0.009	1.789	0.459	15.253	23.288	0.136	3.964	1.220	0.000	100.241
01-JR-MA-027-001	54.304	0.007	2.099	0.397	14.814	22.734	0.202	4.606	1.321	0.000	100.484
01-JR-MA-027-002	54.297	0.055	1.553	0.409	15.267	23.366	0.145	4.026	1.001	0.001	100.120
01-JR-MA-027-003	54.362	0.027	1.416	0.847	15.091	23.446	0.143	4.072	1.034	0.004	100.442
01-JR-MA-027-004	53.895	0.042	1.583	0.466	15.027	23.507	0.220	4.082	1.072	0.000	99.894
01-JR-MA-027-005	54.234	0.035	1.667	0.365	14.763	22.914	0.192	4.938	1.180	0.000	100.288
01-JR-MA-027-007	53.969	0.035	1.961	0.660	14.538	22.422	0.193	4.615	1.465	0.001	99.859
01-JR-MA-027-008	54.627	0.060	1.497	0.448	15.340	23.539	0.148	3.824	0.979	0.002	100.464
01-JR-MA-028-002	54.273	0.058	1.392	0.371	14.835	23.364	0.173	4.480	1.092	0.000	100.038
01-JR-MA-028-003	54.614	0.022	1.597	0.913	15.274	23.090	0.154	3.664	1.126	0.002	100.456
01-JR-MA-028-004	54.355	0.028	1.645	0.487	15.160	23.163	0.179	3.727	1.068	0.001	99.813
01-JR-MA-028-005	54.499	0.012	1.913	0.440	14.626	23.281	0.151	4.414	1.102	0.001	100.439
01-JR-MA-028-006	53.935	0.037	1.234	0.481	15.022	23.157	0.155	4.611	1.100	0.000	99.732
01-JR-MA-029-001	54.377	0.000	0.839	0.557	15.484	24.231	0.137	3.478	0.738	0.000	99.841

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-029-002	54.491	0.023	1.274	0.362	14.883	23.478	0.229	4.662	0.766	0.000	100.168
01-JR-MA-030-002	54.156	0.056	1.531	0.531	14.425	22.900	0.250	4.843	1.182	0.000	99.874
01-JR-MA-030-003	54.678	0.049	1.524	0.325	15.008	23.274	0.147	4.209	1.050	0.002	100.266
01-JR-MA-030-004	54.606	0.043	0.922	0.426	15.299	23.698	0.150	4.457	0.707	0.000	100.308
01-JR-MA-031-001	54.590	0.050	0.871	0.243	15.732	24.425	0.128	3.524	0.574	0.004	100.141
01-JR-MA-031-002	54.579	0.004	1.178	0.400	15.244	23.403	0.166	4.389	0.923	0.000	100.286
01-JR-MA-031-003	54.324	0.055	1.261	0.427	14.769	23.638	0.148	4.435	0.906	0.000	99.963
01-JR-MA-032-001	54.846	0.000	1.105	0.345	15.217	24.137	0.159	4.171	0.778	0.001	100.759
01-JR-MA-032-002	54.122	0.031	1.930	0.520	14.525	23.100	0.172	4.344	1.129	0.002	99.875
01-JR-MA-032-003	54.549	0.015	1.646	0.632	14.729	22.984	0.193	4.237	1.203	0.000	100.188
01-JR-MA-032-004	53.963	0.031	0.961	0.739	15.316	23.469	0.160	4.097	0.824	0.000	99.560
01-JR-MA-032-005	54.472	0.035	0.625	0.407	15.201	23.750	0.191	4.466	0.706	0.000	99.853
01-JR-MA-033-002	54.268	0.037	1.708	0.494	14.681	23.277	0.181	4.616	1.136	0.000	100.398
01-JR-MA-033-003	54.809	0.027	1.756	0.641	14.244	22.993	0.178	4.508	1.111	0.000	100.267
01-JR-MA-033-004	54.167	0.052	1.276	0.698	14.814	23.092	0.205	4.645	1.094	0.000	100.043
01-JR-MA-033-006	54.773	0.047	1.487	0.494	14.798	23.115	0.201	4.655	1.192	0.000	100.762
01-JR-MA-033-007	53.973	0.051	1.946	0.367	14.530	22.909	0.243	5.210	1.144	0.000	100.373
01-JR-MA-034-001	54.240	0.050	1.516	0.728	14.551	22.920	0.213	4.584	1.342	0.000	100.144
01-JR-MA-034-002	53.808	0.014	1.684	0.459	15.057	23.237	0.132	4.211	1.148	0.001	99.751
01-JR-MA-034-003	54.235	0.015	1.356	0.428	14.792	23.403	0.184	4.911	0.932	0.001	100.257
01-JR-MA-034-004	54.233	0.042	1.785	0.404	15.027	23.068	0.134	4.438	1.125	0.000	100.256
01-JR-MA-035-002	53.870	0.071	1.047	1.067	15.696	23.603	0.131	3.384	0.963	0.000	99.832
01-JR-MA-035-003	54.285	0.010	1.010	0.519	15.516	23.113	0.165	4.398	1.037	0.001	100.054
01-JR-MA-035-004	54.655	0.080	0.952	0.545	16.098	24.006	0.109	3.490	0.738	0.000	100.673
01-JR-MA-036-001	54.003	0.039	1.165	0.386	15.646	23.762	0.162	3.845	0.830	0.000	99.838
01-JR-MA-036-002	54.604	0.010	1.663	0.352	14.569	22.664	0.199	5.248	1.178	0.007	100.494
01-JR-MA-036-003	54.177	0.048	1.667	0.358	14.935	23.052	0.172	4.571	0.970	0.000	99.950
01-JR-MA-036-004	53.989	0.042	1.804	0.555	15.194	23.139	0.142	3.840	1.146	0.000	99.851
01-JR-MA-036-005	54.326	0.016	1.674	0.622	14.816	22.741	0.214	4.487	1.219	0.001	100.116
01-JR-MA-038-001	53.989	0.037	1.470	0.232	15.363	23.370	0.170	4.169	0.928	0.000	99.728
01-JR-MA-038-002	54.406	0.054	1.186	0.637	15.184	23.272	0.142	4.118	1.095	0.000	100.094
01-JR-MA-038-003	53.906	0.040	1.064	0.576	15.378	23.362	0.194	4.196	0.884	0.000	99.600
01-JR-MA-038-004	54.390	0.050	1.454	0.647	15.213	22.961	0.167	3.920	1.216	0.000	100.018
01-JR-MA-038-005	54.258	0.023	1.861	0.526	14.913	22.658	0.160	4.288	1.224	0.000	99.911
01-JR-MA-039-001	54.631	0.046	1.529	0.254	14.950	23.074	0.184	5.013	1.020	0.000	100.701
01-JR-MA-039-002	54.279	0.030	1.750	0.774	14.696	22.575	0.188	4.496	1.337	0.005	100.130
01-JR-MA-039-003	53.664	0.000	1.485	0.538	14.582	23.268	0.280	4.661	0.968	0.000	99.446
01-JR-MA-040-001	54.740	0.047	1.222	0.472	14.880	23.105	0.157	4.045	1.143	0.001	99.812
01-JR-MA-040-002	53.955	0.022	1.216	0.309	14.840	23.007	0.186	4.827	0.853	0.000	99.215
01-JR-MA-040-003	53.933	0.044	1.912	0.494	14.610	22.632	0.153	4.305	1.283	0.000	99.366

Sample	SIO2	TIO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-040-004	54.255	0.043	1.465	0.472	14.878	23.182	0.156	4.353	0.957	0.000	99.761
01-JR-MA-040-005	54.206	0.044	1.136	0.420	15.096	23.445	0.178	4.460	0.839	0.000	99.824
01-JR-MA-040-006	54.627	0.021	1.722	0.474	14.524	23.017	0.187	4.489	1.106	0.000	100.167
01-JR-MA-040-007	54.665	0.033	1.939	0.563	14.566	23.094	0.157	3.950	1.133	0.002	100.102
01-JR-MA-040-008	54.318	0.012	1.819	0.456	14.443	23.025	0.176	4.337	1.126	0.000	99.712
01-JR-MA-040-009	54.483	0.029	1.239	0.631	15.021	23.566	0.164	4.237	0.955	0.000	100.325
01-JR-MA-040-010	54.360	0.057	1.587	1.175	14.414	22.238	0.164	4.228	1.521	0.000	99.744
01-JR-MA-041-001	54.363	0.007	1.477	0.573	14.936	23.440	0.172	3.829	0.956	0.000	99.753
01-JR-MA-041-002	54.584	0.073	1.296	0.175	14.910	23.600	0.136	4.194	0.877	0.004	99.849
01-JR-MA-041-003	54.766	0.056	1.154	0.592	15.249	23.543	0.178	3.841	0.818	0.002	100.199
01-JR-MA-041-004	54.257	0.086	1.558	0.670	14.774	22.638	0.186	4.641	1.178	0.000	99.988
01-JR-MA-041-006	54.087	0.035	1.455	0.515	15.378	23.341	0.154	3.679	0.923	0.007	99.574
01-JR-MA-041-007	54.171	0.061	1.002	0.485	15.501	23.475	0.171	4.140	0.806	0.001	99.813
01-JR-MA-042-001	54.601	0.034	0.964	0.392	15.360	23.036	0.184	4.478	0.892	0.004	99.945
01-JR-MA-042-002	54.161	0.023	0.800	0.212	15.607	23.812	0.158	4.222	0.556	0.000	99.551
01-JR-MA-042-003	53.589	0.054	2.170	0.819	14.298	22.337	0.182	4.656	1.474	0.003	99.582
01-JR-MA-042-004	53.747	0.022	1.237	0.388	15.375	23.519	0.176	4.177	0.867	0.000	99.508
01-JR-MA-042-005	54.401	0.040	1.835	0.363	14.662	22.552	0.210	4.946	1.372	0.000	100.381
01-JR-MA-042-006	54.537	0.060	0.513	0.516	16.688	24.732	0.059	2.383	0.354	0.000	99.842
01-JR-MA-042-007	53.935	0.011	1.512	0.420	15.226	23.351	0.168	4.334	0.880	0.000	99.837
01-JR-MA-042-008	53.859	0.053	1.475	0.285	14.980	23.360	0.195	5.050	0.957	0.000	100.214
01-JR-MA-042-009	54.189	0.037	1.755	0.531	15.144	22.887	0.180	4.231	1.134	0.000	100.088
01-JR-MA-043-001	54.069	0.039	1.563	0.363	15.159	22.835	0.158	4.354	1.067	0.000	99.607
01-JR-MA-043-002	53.498	0.005	1.656	0.550	14.342	22.944	0.288	5.192	1.071	0.004	99.550
01-JR-MA-043-003	53.599	0.057	1.552	0.581	15.006	22.788	0.163	4.311	1.138	0.000	99.195
01-JR-MA-043-004	53.964	0.023	1.597	0.535	14.970	22.764	0.174	4.351	1.089	0.002	99.469
01-JR-MA-043-005	53.829	0.033	1.312	0.600	15.359	23.252	0.209	4.387	0.930	0.000	99.911
01-JR-MA-043-006	54.038	0.018	1.265	0.397	15.220	23.445	0.151	4.017	0.941	0.000	99.492
01-JR-MA-045-001	54.152	0.023	1.449	0.332	15.393	22.941	0.164	4.005	1.104	0.000	99.563
01-JR-MA-046-001	54.381	0.077	1.585	0.194	14.772	23.033	0.205	4.761	1.102	0.000	100.110
01-JR-MA-048-003	53.857	0.030	1.623	0.463	14.784	22.929	0.188	4.927	1.075	0.000	99.876
01-JR-MA-049-001	54.624	0.053	0.912	0.889	15.486	22.986	0.161	4.361	1.044	0.000	100.516
01-JR-MA-051-001	54.214	0.042	1.306	0.378	15.468	23.180	0.137	3.767	0.963	0.000	99.455
01-JR-MA-051-002	54.599	0.033	1.552	0.458	15.792	23.036	0.155	3.414	1.054	0.000	100.093
01-JR-MA-051-003	54.359	0.060	1.794	0.516	15.493	23.260	0.136	3.836	1.188	0.003	100.645
01-JR-MA-051-004	54.430	0.000	1.743	0.355	14.643	22.968	0.163	4.697	1.178	0.002	100.179
01-JR-MA-051-005	54.277	0.033	1.218	0.450	15.354	23.429	0.142	4.132	1.004	0.002	100.041
01-JR-MA-051-006	53.973	0.046	1.068	0.409	15.324	23.251	0.162	4.453	0.979	0.002	99.667
01-JR-MA-051-007	54.045	0.038	1.420	0.450	15.462	23.470	0.179	3.709	0.856	0.000	99.629
01-JR-MA-051-008	54.087	0.071	1.290	0.588	15.515	23.418	0.130	3.882	1.047	0.006	100.034

Sample	SIO2	TIO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-051-009	53.929	0.009	1.652	0.414	14.291	23.022	0.217	5.220	1.134	0.000	99.888
01-JR-MA-051-010	54.286	0.096	1.315	0.581	15.451	23.565	0.126	3.446	0.966	0.000	99.832
01-JR-MA-051-011	54.407	0.062	1.829	0.622	14.754	23.003	0.156	3.945	1.161	0.001	99.940
01-JR-MA-051-012	54.219	0.035	1.291	0.372	15.035	23.643	0.162	3.963	0.905	0.001	99.626
01-JR-MA-055-002	54.049	0.039	2.102	0.324	14.460	22.577	0.162	4.570	1.407	0.000	99.690
01-JR-MA-056-001	53.971	0.043	2.101	0.346	14.581	22.501	0.128	3.953	1.378	0.000	99.002
01-JR-MA-056-002	54.393	0.000	1.123	0.340	15.238	23.636	0.231	4.108	0.830	0.000	99.899
01-JR-MA-057-001	53.427	0.020	1.641	0.297	14.149	22.360	0.213	5.662	1.268	0.000	99.037
01-JR-MA-058-005	54.100	0.056	1.842	0.634	14.473	22.250	0.197	4.922	1.499	0.000	99.973
01-JR-MA-058-006	54.543	0.052	1.666	0.440	15.134	23.162	0.196	3.763	1.125	0.000	100.081
01-JR-MA-058-007	53.663	0.071	1.203	0.485	15.307	23.102	0.151	4.193	0.982	0.000	99.157
01-JR-MA-058-008	54.403	0.056	2.072	0.363	14.878	22.668	0.121	3.896	1.390	0.003	99.850
01-JR-MA-059-004	54.265	0.048	1.391	0.704	14.620	22.115	0.167	4.591	1.418	0.000	99.319
01-JR-MA-059-005	54.103	0.054	1.352	0.578	15.334	23.354	0.123	3.612	1.043	0.000	99.553
01-JR-MA-059-006	54.271	0.060	1.943	0.367	14.604	22.219	0.174	4.831	1.394	0.001	99.864
01-JR-MA-060-002	53.266	0.048	2.612	1.030	13.719	21.805	0.217	5.238	1.575	0.001	99.511
01-JR-MA-060-004	53.994	0.053	1.390	0.794	15.211	23.089	0.177	3.721	1.062	0.004	99.495
01-JR-MA-063-001	53.385	0.100	0.997	0.444	15.254	23.618	0.185	4.548	0.815	0.000	99.346
01-JR-MA-063-002	53.729	0.044	2.145	0.462	14.353	22.392	0.232	4.685	1.502	0.000	99.544
01-JR-MA-063-003	54.156	0.037	1.852	0.911	14.432	22.200	0.191	4.545	1.447	0.000	99.771
01-JR-MA-063-004	54.026	0.030	1.256	0.284	15.000	22.972	0.212	5.274	0.989	0.000	100.043
01-JR-MA-063-005	53.696	0.007	1.634	0.469	15.263	23.263	0.166	3.838	1.001	0.000	99.337
01-JR-MA-063-006	53.961	0.066	2.348	0.617	14.816	22.498	0.135	3.979	1.300	0.000	99.720
01-JR-MA-064-002	53.676	0.076	2.315	0.381	14.376	22.127	0.164	5.170	1.562	0.004	99.851
01-JR-MA-064-003	53.658	0.111	1.929	0.742	14.360	22.178	0.190	4.768	1.418	0.003	99.357
01-JR-MA-064-004	53.710	0.062	1.475	0.099	14.812	23.004	0.213	5.286	1.028	0.000	99.689
01-JR-MA-064-006	53.538	0.059	1.671	0.380	15.197	22.829	0.162	4.226	1.052	0.004	99.118
01-JR-MA-064-007	53.876	0.026	1.028	0.416	15.333	23.083	0.191	4.563	0.819	0.005	99.340
01-JR-MA-064-008	54.100	0.048	1.479	0.453	14.947	22.790	0.196	4.366	1.128	0.000	99.507
01-JR-MA-064-009	53.810	0.029	1.273	0.527	15.209	23.295	0.167	4.101	0.981	0.006	99.398
01-JR-MA-064-010	53.542	0.021	1.314	1.168	15.204	23.306	0.204	3.579	1.083	0.000	99.421
01-JR-MA-064-011	53.837	0.048	1.698	0.295	14.680	22.787	0.176	4.816	1.148	0.000	99.485
01-JR-MA-064-013	53.758	0.016	1.950	0.353	14.644	22.592	0.256	4.826	1.098	0.000	99.493
01-JR-MA-064-014	53.812	0.061	1.233	0.579	14.999	23.241	0.252	4.418	0.876	0.000	99.471
01-JR-MA-064-015	53.462	0.013	1.300	0.492	14.761	22.802	0.254	5.030	1.190	0.000	99.304
01-JR-MA-064-016	54.079	0.029	1.613	0.390	15.123	23.170	0.192	4.251	1.012	0.000	99.859
01-JR-MA-064-018	54.408	0.038	1.452	0.690	15.208	23.425	0.146	3.749	1.060	0.003	100.179
01-JR-MA-065-002	53.837	0.000	0.531	0.201	16.418	23.913	0.139	3.609	0.478	0.000	99.126
01-JR-MA-065-003	53.815	0.035	1.350	0.668	15.101	23.013	0.154	4.066	1.013	0.000	99.215
01-JR-MA-066-002	53.670	0.041	1.390	0.363	15.073	23.288	0.214	4.433	0.926	0.000	99.398

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-066-003	53.575	0.061	1.121	0.581	15.036	23.268	0.156	4.168	0.988	0.000	98.954
01-JR-MA-068-003	54.090	0.000	1.463	0.624	14.726	22.519	0.173	4.583	1.178	0.005	99.361
01-JR-MA-068-004	53.723	0.099	1.346	0.365	15.311	23.206	0.144	3.933	1.010	0.000	99.137
01-JR-MA-068-005	53.823	0.027	1.271	0.471	15.348	22.940	0.143	4.189	1.104	0.000	99.316
01-JR-MA-068-006	54.268	0.009	1.402	0.383	15.158	22.821	0.190	4.397	1.018	0.000	99.646
01-JR-MA-068-007	53.898	0.043	1.106	0.456	15.260	23.083	0.193	4.606	0.915	0.000	99.560
01-JR-MA-068-008	53.718	0.018	1.519	0.456	15.322	23.139	0.154	3.882	1.024	0.003	99.235
01-JR-MA-068-009	54.103	0.012	1.782	0.618	14.123	22.398	0.266	5.642	1.329	0.000	100.273
01-JR-MA-068-010	54.050	0.023	1.099	0.799	15.204	22.628	0.173	4.484	1.092	0.000	99.552
01-JR-MA-068-011	54.516	0.009	1.711	0.182	14.786	22.710	0.322	4.853	1.213	0.000	100.302
01-JR-MA-068-012	54.846	0.028	1.335	0.523	15.554	23.588	0.113	3.710	0.948	0.002	100.647
01-JR-MA-068-013	54.117	0.046	1.972	0.710	14.630	22.460	0.196	4.715	1.560	0.000	100.406
01-JR-MA-069-001	53.516	0.068	1.671	0.442	14.824	22.724	0.203	4.752	1.039	0.000	99.239
01-JR-MA-071-001	53.978	0.012	1.179	0.532	15.086	22.848	0.155	4.330	1.193	0.000	99.313
01-JR-MA-073-006	53.751	0.027	0.716	0.597	16.022	23.674	0.146	3.330	0.758	0.000	99.021
01-JR-MA-074-010	54.370	0.015	1.214	0.443	15.997	24.127	0.179	2.963	0.695	0.000	100.003
01-JR-MA-074-011	54.519	0.000	2.166	0.570	14.506	22.030	0.184	4.580	1.559	0.004	100.118
01-JR-MA-075-010	54.060	0.088	1.954	0.397	14.461	22.081	0.161	4.618	1.548	0.002	99.370
01-JR-MA-075-011	54.211	0.030	1.906	0.550	14.658	22.681	0.186	4.603	1.289	0.007	100.121
01-JR-MA-075-012	53.914	0.052	0.813	0.352	16.131	24.271	0.147	3.507	0.479	0.006	99.672
01-JR-MA-075-014	53.828	0.008	1.588	0.396	15.172	23.105	0.181	4.064	1.098	0.000	99.440
01-JR-MA-075-015	53.683	0.053	1.296	0.467	15.609	23.586	0.143	3.686	0.919	0.003	99.445
01-JR-MA-075-016	54.332	0.032	1.234	0.341	15.432	23.404	0.185	4.692	0.924	0.000	100.576
01-JR-MA-075-017	53.801	0.018	1.490	0.385	15.080	23.201	0.193	4.561	0.880	0.003	99.612
01-JR-MA-075-018	53.652	0.028	1.660	0.360	15.406	22.845	0.156	4.050	1.035	0.000	99.192
01-JR-MA-076-001	53.241	0.030	1.661	0.470	15.329	23.213	0.153	4.015	1.135	0.003	99.250
01-JR-MA-076-002	53.649	0.061	1.344	0.487	15.071	23.353	0.179	4.470	0.907	0.000	99.521
01-JR-MA-076-003	52.995	0.025	1.956	0.434	15.181	22.840	0.147	4.113	1.124	0.000	98.815
01-JR-MA-076-004	54.004	0.013	1.154	0.757	15.250	23.135	0.159	3.987	0.996	0.005	99.460
01-JR-MA-077-001	53.431	0.060	1.029	0.864	15.724	23.192	0.114	3.095	0.871	0.003	98.383
01-JR-MA-077-002	53.746	0.060	1.287	0.446	15.497	23.135	0.122	3.693	0.938	0.001	98.925
01-JR-MA-077-003	53.887	0.039	1.787	0.675	14.498	22.329	0.158	4.575	1.429	0.000	99.377
01-JR-MA-077-004	53.935	0.036	1.164	0.488	15.120	23.520	0.210	4.244	0.819	0.000	99.536
01-JR-MA-077-005	53.748	0.052	0.983	0.431	16.047	24.006	0.087	3.202	0.659	0.002	99.217
01-JR-MA-077-006	53.470	0.070	1.493	0.459	15.256	22.909	0.170	4.313	1.031	0.002	99.173
01-JR-MA-078-001	53.978	0.036	0.956	0.914	15.202	22.795	0.200	4.456	1.009	0.000	99.546
01-JR-MA-079-001	54.082	0.048	1.200	1.161	15.218	23.119	0.132	3.439	1.069	0.003	99.471
01-JR-MA-079-002	54.260	0.012	1.748	0.439	14.452	22.256	0.218	5.026	1.306	0.007	99.724
01-JR-MA-079-003	53.986	0.019	1.347	0.343	15.385	23.464	0.177	4.063	0.884	0.004	99.672
01-JR-MA-079-004	54.885	0.045	1.411	0.506	15.310	23.237	0.172	3.910	0.998	0.000	100.474

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-079-005	54.347	0.000	1.292	0.307	15.728	23.647	0.169	3.628	0.828	0.000	99.946
01-JR-MA-079-006	53.459	0.053	1.395	0.699	15.226	23.069	0.153	4.077	1.038	0.000	99.169
01-JR-MA-079-007	53.604	0.043	1.342	0.667	14.887	22.593	0.218	4.720	1.080	0.000	99.154
01-JR-MA-079-008	53.826	0.041	1.314	0.443	15.340	23.083	0.135	4.233	0.903	0.002	99.320
01-JR-MA-079-009	53.375	0.011	1.671	0.404	14.671	22.651	0.235	4.730	1.166	0.000	98.914
01-JR-MA-079-010	53.665	0.012	1.775	0.868	14.770	22.966	0.199	4.233	0.985	0.000	99.473
01-JR-MA-079-011	54.081	0.104	1.737	0.446	14.866	22.553	0.164	4.432	1.193	0.001	99.577
01-JR-MA-079-012	53.807	0.000	2.937	0.572	13.758	21.445	0.192	4.884	1.758	0.000	99.353
01-JR-MA-080-001	53.816	0.040	0.947	0.430	15.662	23.524	0.168	3.942	0.797	0.000	99.326
01-JR-MA-080-002	53.704	0.076	0.972	1.010	15.881	23.828	0.117	3.085	0.914	0.001	99.588
01-JR-MA-083-003	53.748	0.036	2.023	0.763	14.371	22.256	0.160	4.441	1.659	0.000	99.457
01-JR-MA-083-004	53.673	0.015	1.586	0.570	15.455	23.356	0.116	3.524	1.062	0.000	99.357
01-JR-MA-083-005	53.845	0.036	1.575	0.721	15.397	23.129	0.116	3.660	1.093	0.000	99.572
01-JR-MA-083-007	53.751	0.043	1.416	0.497	15.522	23.270	0.130	3.820	0.967	0.000	99.416
01-JR-MA-084-001	53.576	0.051	1.253	0.667	15.121	22.924	0.253	4.444	1.015	0.000	99.304
01-JR-MA-084-002	53.605	0.012	1.109	0.722	15.210	23.012	0.178	4.282	1.024	0.000	99.154
01-JR-MA-085-001	53.510	0.043	1.159	0.649	15.235	23.102	0.166	4.395	1.105	0.000	99.364
01-JR-MA-085-002	53.949	0.049	1.286	0.456	15.672	23.431	0.130	3.768	0.910	0.002	99.653
01-JR-MA-087-001	53.857	0.071	1.216	0.881	15.500	23.265	0.166	3.919	1.014	0.000	99.889
01-JR-MA-087-002	53.829	0.012	1.750	0.443	14.687	22.326	0.191	4.678	1.304	0.000	99.220
01-JR-MA-087-003	54.096	0.032	1.413	0.217	15.313	23.335	0.215	4.280	1.006	0.002	99.909
01-JR-MA-087-004	53.932	0.039	2.053	0.427	14.756	22.817	0.129	4.411	1.232	0.000	99.796
01-JR-MA-087-005	54.315	0.035	1.666	0.469	15.160	23.292	0.156	3.949	1.080	0.002	100.124
01-JR-MA-087-006	54.132	0.039	1.909	0.364	15.268	23.120	0.141	3.756	1.184	0.001	99.914
01-JR-MA-087-007	54.072	0.008	1.471	0.787	14.851	22.532	0.247	4.295	1.240	0.000	99.503
01-JR-MA-087-008	53.999	0.067	1.495	0.553	14.992	22.877	0.150	4.030	1.168	0.000	99.331
01-JR-MA-087-009	54.243	0.049	1.891	0.609	15.097	22.734	0.184	4.234	1.183	0.003	100.227
01-JR-MA-087-010	54.098	0.058	1.390	0.751	14.760	22.618	0.163	4.680	1.240	0.000	99.758
01-JR-MA-087-012	53.734	0.034	1.507	0.474	15.245	23.247	0.172	4.297	0.940	0.000	99.650
01-JR-MA-087-013	54.011	0.043	1.661	0.507	15.001	22.754	0.211	4.101	1.092	0.002	99.383
01-JR-MA-087-014	54.385	0.035	1.509	0.408	15.017	23.039	0.199	4.499	1.067	0.002	100.160
01-JR-MA-087-015	53.352	0.081	1.229	0.484	14.945	23.341	0.215	4.518	0.927	0.000	99.092
01-JR-MA-087-016	54.820	0.014	1.384	0.392	15.834	23.518	0.142	3.512	0.978	0.000	100.594
01-JR-MA-087-017	54.700	0.033	0.790	0.762	15.335	23.998	0.156	4.218	0.740	0.000	100.732
01-JR-MA-088-001	54.194	0.042	1.330	0.408	15.394	23.218	0.174	4.139	0.954	0.000	99.853
01-JR-MA-088-002	53.944	0.025	1.153	0.391	15.656	23.434	0.220	3.829	0.873	0.001	99.526
01-JR-MA-088-003	53.962	0.071	1.324	0.435	15.325	22.891	0.139	4.360	1.039	0.000	99.546
01-JR-MA-088-004	53.538	0.048	0.915	0.427	15.492	23.858	0.157	4.212	0.731	0.000	99.378
01-JR-MA-088-005	53.234	0.028	1.539	0.617	15.221	23.118	0.142	4.321	1.013	0.000	99.233
01-JR-MA-088-006	53.804	0.076	1.638	0.360	15.040	22.859	0.160	4.219	1.100	0.000	99.256

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-088-007	53.788	0.038	2.210	0.223	15.295	22.569	0.118	3.727	1.289	0.000	99.257
01-JR-MA-088-009	54.263	0.043	1.659	0.360	15.126	22.733	0.149	4.231	1.174	0.000	99.738
01-JR-MA-088-010	53.111	0.025	1.595	0.339	14.931	22.944	0.185	4.747	0.989	0.000	98.866
01-JR-MA-088-011	53.734	0.048	1.587	0.470	15.045	22.845	0.157	4.305	1.103	0.000	99.294
01-JR-MA-088-012	53.505	0.057	1.457	0.427	15.336	23.106	0.176	4.323	0.833	0.003	99.223
01-JR-MA-088-013	53.499	0.040	0.933	0.652	15.635	23.312	0.274	4.138	0.808	0.000	99.291
01-JR-MA-089-001	53.813	0.019	1.280	0.285	15.083	23.379	0.235	4.802	0.783	0.000	99.679
01-JR-MA-089-002	53.594	0.013	1.143	0.361	15.559	23.426	0.170	3.916	0.826	0.002	99.010
01-JR-MA-090-001	54.020	0.055	0.421	0.415	16.407	23.886	0.127	3.539	0.493	0.000	99.363
01-JR-MA-091-001	53.800	0.060	0.890	0.814	15.745	23.320	0.172	3.788	0.860	0.003	99.452
01-JR-MA-092-001	53.280	0.036	1.422	0.498	14.914	22.659	0.212	4.687	1.120	0.000	98.828
01-JR-MA-092-002	53.324	0.046	1.365	0.751	14.447	22.701	0.198	5.007	1.295	0.000	99.134
01-JR-MA-092-003	53.636	0.032	1.656	0.543	15.056	22.872	0.164	4.159	1.240	0.000	99.358
01-JR-MA-093-001	53.203	0.022	1.532	0.434	15.640	23.353	0.156	3.650	0.894	0.000	98.884
01-JR-MA-093-002	54.011	0.022	1.280	0.664	15.506	23.074	0.183	3.912	1.035	0.000	99.687
01-JR-MA-093-003	53.733	0.050	1.416	0.601	15.226	23.093	0.192	4.471	1.080	0.003	99.865
01-JR-MA-093-004	53.216	0.038	0.963	0.323	15.685	23.749	0.162	3.887	0.745	0.001	98.769
01-JR-MA-093-005	53.449	0.057	1.916	0.541	15.035	22.751	0.165	4.187	1.118	0.004	99.223
01-JR-MA-093-006	53.666	0.058	2.265	0.254	14.678	22.148	0.160	4.957	1.379	0.000	99.565
01-JR-MA-094-001	53.939	0.014	1.508	0.308	15.618	23.198	0.096	3.255	1.006	0.000	98.942
01-JR-MA-094-002	53.869	0.041	1.516	0.545	15.641	23.100	0.153	3.755	0.951	0.000	99.571
01-JR-MA-094-003	53.771	0.030	1.318	0.706	14.361	21.859	0.299	5.386	1.378	0.000	99.108
01-JR-MA-095-001	53.405	0.073	1.725	0.332	15.114	22.929	0.142	4.248	1.092	0.004	99.064
01-JR-MA-095-002	53.728	0.052	1.717	0.438	15.338	23.228	0.136	4.021	1.014	0.006	99.678
01-JR-MA-095-003	53.650	0.064	1.973	0.880	15.087	22.884	0.134	3.668	1.135	0.001	99.476
01-JR-MA-096-004	53.074	0.011	1.241	0.453	14.847	23.496	0.273	4.657	0.783	0.001	98.836
01-JR-MA-098-003	53.720	0.008	0.740	0.387	15.518	24.489	0.164	3.940	0.638	0.000	99.604
01-JR-MA-099-007	53.335	0.019	0.701	0.455	15.131	23.561	0.175	4.647	0.721	0.000	98.745
01-JR-MA-099-008	53.893	0.042	0.948	0.449	15.317	23.585	0.181	4.150	0.759	0.003	99.327
01-JR-MA-099-009	54.437	0.014	0.970	0.237	15.743	23.993	0.135	3.829	0.739	0.000	100.097
01-JR-MA-100-009	53.900	0.076	0.841	0.408	15.851	24.199	0.147	4.050	0.706	0.000	100.178
01-JR-MA-102-006	54.628	0.102	1.512	0.485	15.015	23.154	0.139	4.153	1.137	0.000	100.325
01-JR-MA-102-008	54.161	0.088	1.752	0.479	14.784	22.993	0.170	4.437	1.163	0.000	100.027
01-JR-MA-103-001	54.159	0.040	2.189	0.639	14.694	22.576	0.133	3.849	1.330	0.000	99.609
01-JR-MA-104-003	53.257	0.035	2.376	0.469	14.274	22.302	0.204	5.266	1.297	0.001	99.481
01-JR-MA-104-004	54.136	0.050	0.817	0.399	15.372	23.668	0.162	4.179	0.804	0.000	99.587
01-JR-MA-104-006	54.412	0.025	1.323	0.331	15.383	23.032	0.219	4.534	0.883	0.000	100.142
01-JR-MA-104-007	53.391	0.044	1.510	0.614	14.879	22.870	0.189	4.771	1.134	0.000	99.402
01-JR-MA-104-008	54.452	0.028	1.933	0.730	15.042	22.592	0.190	3.617	1.484	0.000	100.068
01-JR-MA-104-009	53.959	0.050	1.856	0.610	14.589	22.742	0.176	4.366	1.212	0.001	99.561

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-104-011	53.456	0.015	1.554	0.175	14.784	23.105	0.215	5.123	0.934	0.000	99.361
01-JR-MA-105-001	53.827	0.000	1.416	0.420	15.241	23.463	0.217	4.038	0.965	0.000	99.587
01-JR-MA-106-003	53.836	0.000	1.629	0.379	14.905	22.460	0.205	4.521	1.283	0.003	99.221
01-JR-MA-106-004	54.043	0.056	0.991	1.102	15.545	23.392	0.122	3.141	0.970	0.000	99.362
01-JR-MA-106-005	54.161	0.058	0.516	0.549	15.911	23.426	0.162	3.877	0.541	0.000	99.201
01-JR-MA-106-006	53.968	0.016	0.949	0.500	15.385	23.604	0.148	3.998	0.783	0.000	99.351
01-JR-MA-106-007	53.448	0.085	0.665	0.319	15.709	23.640	0.163	4.405	0.594	0.004	99.032
01-JR-MA-106-008	54.148	0.024	1.300	0.556	15.129	22.850	0.164	4.306	1.208	0.001	99.686
01-JR-MA-106-009	54.223	0.066	1.767	0.468	14.747	22.660	0.179	4.538	1.256	0.000	99.904
01-JR-MA-106-010	54.331	0.058	1.512	0.350	15.605	23.351	0.148	3.773	0.973	0.000	100.101
01-JR-MA-106-011	54.077	0.045	1.332	0.300	15.330	23.418	0.148	3.864	0.868	0.002	99.384
01-JR-MA-106-012	54.182	0.060	1.346	0.704	15.297	22.921	0.156	3.851	1.020	0.001	99.538
01-JR-MA-106-013	53.975	0.056	1.286	0.518	15.152	22.780	0.173	4.226	1.121	0.000	99.287
01-JR-MA-106-014	54.185	0.025	1.462	0.698	14.786	22.573	0.213	4.539	1.254	0.000	99.735
01-JR-MA-107-001	54.248	0.075	0.870	0.628	15.909	23.680	0.110	3.387	0.758	0.000	99.665
01-JR-MA-107-002	53.967	0.034	1.641	1.069	14.817	22.520	0.117	3.640	1.392	0.002	99.199
01-JR-MA-107-003	53.827	0.055	1.731	0.353	14.943	22.942	0.159	4.765	1.068	0.000	99.843
01-JR-MA-107-004	53.864	0.015	1.394	0.872	14.961	22.799	0.155	3.850	1.050	0.005	98.965
01-JR-MA-108-001	53.112	0.012	1.563	0.416	14.209	22.555	0.258	5.311	1.085	0.000	98.521
01-JR-MA-108-002	53.053	0.054	1.899	0.628	14.475	22.211	0.234	4.596	1.281	0.000	98.431
01-JR-MA-108-003	53.196	0.023	1.582	0.355	14.786	23.023	0.220	4.735	0.939	0.000	98.859
01-JR-MA-108-004	53.687	0.024	1.784	0.437	14.795	22.853	0.203	3.924	1.114	0.000	98.821
01-JR-MA-108-005	53.626	0.069	1.272	0.754	14.922	22.705	0.143	4.163	1.084	0.000	98.738
01-JR-MA-109-002	54.069	0.035	1.282	0.364	15.220	23.111	0.156	4.215	0.960	0.000	99.412
01-JR-MA-109-003	54.403	0.009	1.127	0.580	15.563	23.218	0.220	3.520	0.868	0.000	99.508
01-JR-MA-109-004	53.624	0.062	1.807	0.660	14.697	22.409	0.162	4.392	1.241	0.000	99.054
01-JR-MA-109-005	54.458	0.044	1.297	0.629	15.272	23.373	0.233	3.850	0.915	0.001	100.072
01-JR-MA-110-001	53.244	0.065	1.443	0.404	14.973	23.438	0.181	4.365	0.918	0.001	99.032
01-JR-MA-110-002	53.350	0.029	1.410	0.260	15.081	22.794	0.163	4.498	1.055	0.001	98.641
01-JR-MA-110-003	53.574	0.044	1.400	0.542	15.154	23.141	0.155	4.368	0.909	0.000	99.287
01-JR-MA-110-004	53.774	0.014	1.212	0.429	14.679	22.881	0.193	4.602	0.952	0.000	98.736
01-JR-MA-111-004	53.981	0.022	1.606	0.344	15.009	22.610	0.150	4.168	1.142	0.000	99.032
01-JR-MA-111-005	53.831	0.007	1.445	0.438	14.358	22.552	0.246	5.340	0.996	0.000	99.213
01-JR-MA-111-006	53.491	0.050	1.390	0.338	15.357	23.236	0.140	4.087	0.958	0.000	99.047
01-JR-MA-111-007	53.331	0.034	1.137	0.758	15.532	23.013	0.136	3.471	0.961	0.000	98.373
01-JR-MA-111-008	53.525	0.032	1.728	0.391	14.989	22.693	0.140	4.223	0.974	0.000	98.695
01-JR-MA-111-009	53.511	0.001	2.128	0.526	14.177	22.719	0.201	5.360	1.237	0.000	99.860
01-JR-MA-112-002	53.656	0.040	1.802	0.487	14.554	22.275	0.153	4.405	1.285	0.000	98.657
01-JR-MA-112-003	53.619	0.040	1.916	0.724	14.312	22.620	0.260	5.065	1.201	0.000	99.757
01-JR-MA-113-001	53.838	0.078	1.346	1.190	14.734	22.625	0.165	4.146	1.215	0.000	99.337

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-113-003	53.995	0.076	0.781	0.764	15.659	23.211	0.134	3.645	0.773	0.000	99.038
01-JR-MA-114-001	54.359	0.044	0.673	0.396	15.864	23.826	0.202	4.033	0.583	0.000	99.980
01-JR-MA-114-003	53.999	0.021	1.365	0.355	15.674	23.098	0.149	3.629	0.925	0.000	99.215
01-JR-MA-114-004	53.518	0.022	0.695	0.302	16.152	24.074	0.138	3.456	0.619	0.000	98.976
01-JR-MA-114-005	53.953	0.035	1.544	0.341	15.289	22.952	0.171	4.048	0.918	0.000	99.251
01-JR-MA-114-006	53.277	0.067	1.391	0.486	15.150	22.549	0.179	4.187	1.088	0.001	98.375
01-JR-MA-114-007	53.544	0.010	1.097	0.170	15.303	23.597	0.175	4.272	0.697	0.000	98.865
01-JR-MA-114-008	53.462	0.031	1.203	0.319	15.443	23.198	0.175	3.821	0.801	0.000	98.453
01-JR-MA-114-009	53.812	0.038	1.433	0.468	15.316	22.807	0.129	3.590	1.068	0.002	98.663
01-JR-MA-114-010	54.139	0.017	1.650	0.323	14.979	23.040	0.163	4.261	1.113	0.000	99.685
01-JR-MA-114-011	54.470	0.009	1.174	0.441	15.701	23.750	0.152	3.365	0.802	0.000	99.864
01-JR-MA-114-012	53.623	0.014	1.852	0.653	14.721	22.621	0.172	4.073	1.190	0.003	98.922
01-JR-MA-114-013	54.096	0.059	1.047	0.573	15.176	23.131	0.153	4.046	0.990	0.006	99.277
01-JR-MA-115-001	53.967	0.062	1.313	0.384	15.172	22.812	0.159	4.308	1.082	0.000	99.259
01-JR-MA-115-002	53.468	0.021	1.601	0.645	14.321	22.246	0.210	4.947	1.239	0.002	98.700
01-JR-MA-116-001	53.446	0.017	1.412	0.286	15.171	23.242	0.172	4.072	0.894	0.000	98.712
01-JR-MA-116-002	53.606	0.005	0.965	0.461	15.416	22.967	0.207	4.120	0.901	0.000	98.648
01-JR-MA-116-003	53.922	0.037	1.370	0.340	15.301	22.804	0.129	3.951	1.027	0.000	98.881
01-JR-MA-116-004	54.118	0.031	1.935	0.422	15.332	22.942	0.122	3.741	1.179	0.000	99.822
01-JR-MA-117-001	53.853	0.018	2.048	0.688	14.330	22.207	0.173	4.821	1.740	0.002	99.880
01-JR-MA-118-001	52.987	0.020	1.831	0.949	14.564	22.460	0.156	4.228	1.291	0.001	98.487
01-JR-MA-118-002	53.970	0.023	1.348	0.312	15.296	23.222	0.150	3.883	0.912	0.000	99.116
01-JR-MA-119-001	54.949	0.052	1.076	0.702	14.898	23.152	0.138	4.236	1.022	0.000	100.225
01-JR-MA-120-001	53.956	0.058	1.075	0.693	15.537	22.609	0.163	4.347	1.244	0.005	99.687
01-JR-MA-120-002	54.868	0.042	1.182	0.501	15.231	23.541	0.156	3.583	0.910	0.000	100.014
01-JR-MA-120-003	54.225	0.040	0.836	0.675	15.286	23.469	0.171	4.114	0.817	0.000	99.633
01-JR-MA-120-004	54.362	0.010	1.665	0.312	15.147	23.406	0.166	3.688	0.977	0.000	99.733
01-JR-MA-120-005	54.299	0.010	1.272	0.356	15.232	23.870	0.178	4.153	0.764	0.000	100.134
01-JR-MA-120-007	54.298	0.001	1.659	0.487	14.792	22.993	0.145	4.247	1.143	0.005	99.770
01-JR-MA-120-009	55.043	0.066	1.586	0.783	14.934	22.587	0.171	4.237	1.391	0.000	100.798
01-JR-MA-120-011	54.625	0.001	1.378	0.414	14.885	23.241	0.180	4.738	0.881	0.000	100.343
01-JR-MA-123-026	54.064	0.078	0.849	0.559	16.091	22.245	0.136	3.825	0.631	0.011	98.489
01-JR-MA-123-027	53.408	0.131	1.194	0.951	15.762	22.902	0.164	3.745	0.892	0.011	99.160
01-JR-MA-123-028	53.849	0.037	1.166	0.293	14.905	23.075	0.168	4.378	0.961	0.002	98.834
01-JR-MA-123-032	54.054	0.061	0.723	0.541	16.850	23.265	0.103	3.127	0.454	0.000	99.178
01-JR-MA-125-001	53.434	0.081	1.516	0.618	14.976	22.657	0.175	4.499	1.228	0.000	99.184
01-JR-MA-126-007	53.563	0.041	2.266	0.503	13.989	22.212	0.210	5.334	1.467	0.003	99.588
01-JR-MA-126-008	53.881	0.034	1.092	0.563	15.224	23.503	0.160	4.225	0.918	0.000	99.600
01-JR-MA-126-010	53.633	0.052	0.889	0.249	15.493	23.863	0.163	4.179	0.577	0.000	99.098
01-JR-MA-126-011	53.682	0.000	1.782	0.712	14.950	22.700	0.198	4.180	1.147	0.000	99.351

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-128-002	53.909	0.002	1.093	0.503	15.296	23.372	0.181	3.684	0.873	0.000	98.913
01-JR-MA-129-010	53.994	0.044	1.275	0.621	15.735	23.323	0.133	3.243	0.803	0.001	99.172
01-JR-MA-129-011	54.040	0.009	1.437	0.357	14.862	22.988	0.196	4.430	1.135	0.000	99.454
01-JR-MA-129-012	53.387	0.072	2.060	0.564	14.493	22.486	0.177	4.239	1.220	0.000	98.698
01-JR-MA-130-004	53.635	0.031	1.480	1.270	14.344	22.879	0.390	4.446	1.213	0.000	99.688
01-JR-MA-130-005	54.702	0.085	1.558	0.611	15.477	23.161	0.105	3.535	1.063	0.000	100.297
01-JR-MA-130-007	54.165	0.058	1.541	0.354	15.235	23.268	0.187	4.150	1.115	0.000	100.073
01-JR-MA-131-003	53.320	0.009	1.364	0.790	14.780	22.891	0.403	4.213	1.143	0.001	98.914
01-JR-MA-131-004	54.076	0.016	0.892	0.302	15.340	23.392	0.159	4.027	0.826	0.000	99.030
01-JR-MA-131-005	53.170	0.032	0.689	0.649	15.134	23.383	0.138	3.876	0.671	0.000	97.742
01-JR-MA-131-006	53.537	0.037	0.597	0.344	15.113	23.987	0.192	4.465	0.534	0.005	98.811
01-JR-MA-132-007	54.061	0.213	2.705	0.986	18.548	16.193	0.135	4.080	1.711	0.023	98.655
01-JR-MA-132-008	54.169	0.018	1.704	0.775	14.692	22.727	0.279	4.846	1.301	0.000	100.511
01-JR-MA-135-039	53.204	0.063	0.828	0.436	14.974	23.703	0.190	4.684	0.578	0.000	98.660
01-JR-MA-135-042	53.566	0.002	1.012	0.281	14.962	23.429	0.211	4.811	0.726	0.000	99.000
01-JR-MA-135-047	54.216	0.016	0.455	0.309	16.126	24.942	0.122	3.246	0.282	0.001	99.715
01-JR-MA-135-048	53.555	0.035	1.369	0.293	14.934	23.243	0.189	4.513	0.902	0.000	99.033
01-JR-MA-135-052	53.673	0.032	0.858	0.474	15.249	23.938	0.162	4.560	0.702	0.000	99.648
01-JR-MA-135-054	53.348	0.061	1.123	0.398	15.081	23.626	0.231	4.801	0.764	0.000	99.433
01-JR-MA-136-008	54.234	0.038	1.077	0.474	15.445	23.490	0.142	3.958	0.929	0.000	99.787
01-JR-MA-144-021	54.260	0.466	3.631	0.908	17.174	15.358	0.133	4.352	2.546	0.010	98.838
01-JR-MA-149-004	53.912	0.022	1.584	0.610	14.863	22.875	0.197	4.273	0.994	0.003	99.333
01-JR-MA-150-003	54.861	0.147	2.264	1.091	18.460	18.022	0.106	3.047	1.515	0.028	99.541
01-JR-MA-156-013	54.258	0.040	1.105	0.502	15.339	23.671	0.144	3.967	0.860	0.002	99.888
01-JR-MA-158-001	53.598	0.076	0.907	0.680	15.131	23.551	0.172	4.425	0.830	0.000	99.370
01-JR-MA-158-002	54.309	0.009	0.489	0.835	14.932	24.004	0.177	4.534	0.760	0.000	100.049
01-JR-MA-158-003	53.928	0.031	1.093	0.423	15.197	23.712	0.145	4.170	0.851	0.003	99.553
01-JR-MA-158-004	53.608	0.046	0.697	0.608	15.848	24.260	0.150	3.576	0.659	0.000	99.452
01-JR-MA-160-001	54.197	0.055	0.849	0.436	15.370	23.854	0.145	3.849	0.689	0.000	99.444
01-JR-MA-162-026	53.797	0.050	1.181	0.690	15.441	23.758	0.154	3.819	0.696	0.000	99.586
01-JR-MA-165-040	55.261	0.227	4.167	0.744	17.410	15.368	0.125	4.391	2.519	0.020	100.232
01-JR-MA-165-042	54.806	0.020	2.133	1.300	16.434	22.584	0.087	1.781	1.294	0.000	100.439
01-JR-MA-165-047	54.453	0.196	2.620	1.033	16.277	20.705	0.065	2.110	1.987	0.000	99.446
01-JR-MA-165-063	54.335	0.204	3.302	0.485	18.228	15.697	0.137	4.855	2.020	0.019	99.282
01-JR-MA-171-003	52.809	0.029	0.726	0.199	14.946	23.610	0.223	5.547	0.530	0.003	98.622
01-JR-MA-172-016	54.739	0.091	0.891	0.707	17.315	23.117	0.092	2.664	0.628	0.001	100.245
01-JR-MA-178-002	54.376	0.130	5.817	0.623	13.524	17.924	0.108	3.336	3.289	0.000	99.127
01-JR-MA-180-031	55.203	0.182	1.780	0.946	19.013	18.647	0.119	3.477	1.022	0.030	100.419
01-JR-MA-197-001	53.639	0.078	0.721	0.393	15.626	23.539	0.148	3.319	0.634	0.000	98.097
01-JR-MA-203-001	52.971	0.008	1.283	0.259	14.900	23.226	0.207	4.449	0.957	0.000	98.260

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-203-002	52.202	0.028	1.556	0.437	14.217	22.716	0.177	4.650	1.111	0.000	97.094
01-JR-MA-203-003	54.337	0.030	1.352	0.449	15.141	23.664	0.227	4.354	0.805	0.000	100.359
01-JR-MA-204-001	52.807	0.047	0.786	0.453	15.077	23.391	0.184	4.135	0.674	0.003	97.557
01-JR-MA-207-001	52.891	0.037	0.648	0.340	15.354	23.696	0.160	4.286	0.650	0.000	98.062
01-JR-MA-207-003	52.816	0.057	0.825	0.850	15.225	23.114	0.176	3.884	0.827	0.000	97.774
01-JR-MA-210-015	54.912	0.439	2.817	0.696	17.698	17.864	0.110	3.642	1.827	0.021	100.026
01-JR-MA-215-001	53.323	0.083	0.858	0.320	15.141	23.657	0.171	4.701	0.730	0.001	98.985
01-JR-MA-215-002	53.489	0.036	0.907	0.411	15.115	23.582	0.148	4.283	0.906	0.000	98.877
01-JR-MA-217-011	52.762	0.079	0.950	0.319	15.157	23.452	0.153	4.611	0.793	0.000	98.276
01-JR-MA-217-015	53.999	0.266	1.827	1.419	18.553	18.210	0.110	3.004	1.401	0.029	98.818
01-JR-MA-217-016	53.220	0.081	1.148	0.665	15.883	22.485	0.139	3.767	0.644	0.024	98.056
01-JR-MA-218-024	53.359	0.020	0.721	0.681	14.981	23.709	0.172	4.317	0.779	0.005	98.744
01-JR-MA-218-025	53.286	0.025	0.909	0.226	15.576	23.615	0.137	3.950	0.733	0.000	98.457
01-JR-MA-218-026	54.007	0.159	0.814	0.797	16.948	21.632	0.108	3.328	1.068	0.005	98.866
01-JR-MA-218-027	53.119	0.079	1.251	0.373	15.247	23.511	0.148	4.293	0.851	0.004	98.876
01-JR-MA-218-029	54.179	0.012	0.848	0.168	15.767	23.903	0.169	4.075	0.550	0.000	99.671
01-JR-MA-218-030	54.363	0.044	0.960	0.400	15.256	23.938	0.154	4.329	0.698	0.000	100.142
01-JR-MA-218-032	53.643	0.022	1.021	0.465	15.227	23.846	0.163	4.224	0.762	0.000	99.373
01-JR-MA-222-001	54.522	0.174	1.866	0.827	19.083	18.816	0.121	3.544	1.022	0.028	100.003
01-JR-MA-224-001	55.037	0.030	0.916	0.816	15.678	23.670	0.146	3.797	0.798	0.000	100.888
01-JR-MA-224-002	54.015	0.070	1.105	0.463	15.646	23.437	0.172	4.558	0.644	0.000	100.110
01-JR-MA-224-003	54.249	0.065	0.845	0.465	15.676	24.040	0.159	4.078	0.610	0.000	100.187
01-JR-MA-224-004	53.732	0.040	1.287	0.410	15.207	23.673	0.133	4.080	0.833	0.000	99.395
01-JR-MA-224-005	53.402	0.054	0.871	0.575	15.117	23.741	0.167	4.450	0.802	0.000	99.179
01-JR-MA-224-006	53.528	0.039	1.038	1.208	15.301	23.084	0.185	4.287	0.856	0.007	99.533
01-JR-MA-224-007	54.529	0.029	0.927	0.350	15.824	24.141	0.150	3.914	0.738	0.000	100.602
01-JR-MA-224-008	54.753	0.098	2.121	1.288	16.423	21.605	0.094	2.451	1.652	0.002	100.487
01-JR-MA-226-001	55.113	0.107	0.280	1.185	17.185	23.600	0.073	1.665	0.835	0.000	100.043
01-JR-MA-226-002	54.067	0.032	1.113	0.281	15.247	23.846	0.168	4.295	0.899	0.000	99.948
01-JR-MA-227-001	54.100	0.018	1.112	0.452	15.404	23.806	0.151	3.925	0.914	0.002	99.884
01-JR-MA-230-002	54.457	0.040	1.420	0.382	15.077	23.581	0.187	4.373	0.874	0.000	100.391
01-JR-MA-230-003	53.882	0.041	1.072	0.445	15.252	23.912	0.227	4.509	0.726	0.000	100.066
01-JR-MA-236-002	54.634	0.010	0.669	0.341	15.820	24.320	0.176	4.040	0.586	0.000	100.596
01-JR-MA-241-002	54.254	0.056	0.939	0.270	15.752	23.864	0.126	3.888	0.777	0.000	99.926
01-JR-MA-241-003	54.520	0.039	2.081	0.421	15.215	22.856	0.118	3.864	1.319	0.000	100.433
01-JR-MA-241-004	54.307	0.068	1.094	0.123	15.323	23.477	0.222	4.571	0.812	0.000	99.997
01-JR-MA-241-005	54.209	0.047	1.656	0.396	15.293	23.284	0.145	3.990	0.988	0.000	100.008
01-JR-MA-241-006	54.007	0.062	1.766	0.420	14.908	22.970	0.159	4.444	1.270	0.000	100.006
01-JR-MA-241-007	53.636	0.054	1.683	0.283	15.429	23.604	0.195	4.159	0.938	0.000	99.981
01-JR-MA-241-008	54.452	0.061	0.996	0.382	15.716	23.733	0.139	3.850	0.822	0.000	100.151

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-241-009	53.797	0.046	1.795	0.314	14.578	22.879	0.227	5.168	1.185	0.000	99.989
01-JR-MA-241-010	54.413	0.032	1.493	0.455	14.882	23.187	0.193	4.380	1.142	0.000	100.177
01-JR-MA-243-005	54.432	0.046	0.730	0.335	15.167	24.162	0.168	4.511	0.658	0.000	100.209
01-JR-MA-253-016	55.288	0.011	1.738	1.048	16.575	23.143	0.081	1.255	0.962	0.001	100.102
01-JR-MA-253-020	55.189	0.234	2.955	0.894	17.915	16.791	0.125	4.232	1.923	0.016	100.274
01-JR-SG-001-144	54.415	0.070	0.869	0.513	15.541	24.379	0.155	3.966	0.544	0.003	100.455
01-JR-SG-001-151	54.878	0.334	2.910	0.685	18.151	17.500	0.114	3.756	1.781	0.033	100.142
01-JR-SG-004-001	54.441	0.033	1.547	0.988	14.872	22.752	0.234	4.321	1.304	0.000	100.492
01-JR-SG-004-002	54.637	0.000	1.028	0.410	15.714	23.935	0.182	3.842	0.732	0.001	100.481
01-JR-SG-005-001	54.061	0.008	1.619	0.462	14.965	23.009	0.189	4.555	1.127	0.000	99.995
01-JR-SG-007-004	54.449	0.045	1.577	0.514	14.831	23.243	0.167	4.349	1.193	0.000	100.368
01-JR-SG-009-002	54.337	0.036	0.940	0.493	15.402	23.903	0.159	4.403	0.807	0.002	100.482
01-JR-SG-009-003	54.126	0.092	0.791	0.384	15.403	23.428	0.239	4.807	0.800	0.000	100.070
01-JR-SG-009-004	54.522	0.028	0.844	0.332	15.042	23.763	0.167	4.662	0.817	0.000	100.177
01-JR-SG-010-009	54.518	0.034	0.897	0.289	15.974	24.168	0.140	3.493	0.590	0.000	100.103
01-JR-SG-010-011	54.352	0.018	0.833	0.458	15.438	24.021	0.170	4.038	0.673	0.003	100.004
01-JR-SG-010-014	53.852	0.025	1.518	0.398	14.906	23.152	0.183	4.539	1.112	0.000	99.685
01-JR-SG-010-016	53.902	0.024	1.372	0.398	15.080	23.728	0.172	4.450	0.905	0.000	100.031
01-JR-SG-011-010	55.180	0.026	0.973	0.603	15.755	23.997	0.122	3.549	0.791	0.000	100.996
01-JR-SG-011-011	54.123	0.027	1.033	0.772	15.382	23.360	0.152	4.079	1.016	0.000	99.944
01-JR-SG-012-008	54.286	0.064	0.636	0.337	15.508	23.879	0.161	4.455	0.666	0.000	99.992
01-JR-TM-001-001	53.013	0.040	2.398	0.521	14.714	22.462	0.155	4.317	1.426	0.004	99.050
01-JR-TM-001-002	53.633	0.025	1.290	0.454	14.895	23.079	0.169	4.424	0.966	0.000	98.935
01-JR-TM-001-003	53.650	0.037	1.314	0.492	14.780	22.820	0.178	4.773	1.200	0.000	99.244
01-JR-TM-001-005	54.053	0.017	1.452	0.307	15.425	23.400	0.181	4.069	0.897	0.000	99.801
01-JR-TM-001-006	54.565	0.032	1.562	0.394	15.031	22.792	0.125	4.080	1.031	0.000	99.612
01-JR-TM-001-007	54.008	0.008	2.109	0.455	14.696	22.537	0.164	4.415	1.278	0.000	99.670
01-JR-TM-001-008	53.486	0.035	1.429	0.359	15.216	22.957	0.164	4.033	1.095	0.004	98.778
01-JR-TM-001-009	54.672	0.043	1.287	0.533	15.846	23.215	0.149	3.492	1.033	0.002	100.272
01-JR-TM-001-010	53.761	0.063	1.095	0.567	15.151	23.365	0.280	4.067	0.842	0.000	99.191
01-JR-TM-001-011	53.507	0.010	1.698	0.778	14.756	23.021	0.167	4.192	1.158	0.000	99.287
01-JR-TM-001-012	53.899	0.057	1.678	0.548	15.229	22.900	0.186	4.050	1.084	0.000	99.631
01-JR-TM-001-013	53.467	0.067	1.378	0.358	15.002	22.950	0.211	4.930	0.901	0.001	99.265
01-JR-TM-001-014	53.719	0.040	1.839	0.289	14.864	22.897	0.227	4.573	1.094	0.003	99.545
01-JR-TM-001-016	54.040	0.040	1.633	0.441	14.730	22.354	0.178	4.787	1.378	0.000	99.581
01-JR-TM-001-017	53.502	0.011	1.217	0.442	15.104	22.950	0.233	4.898	0.978	0.000	99.335
01-JR-TM-004-004	53.687	0.078	1.326	0.827	15.139	23.526	0.190	4.588	0.735	0.005	100.101
01-JR-TM-006-004	54.471	0.038	1.134	0.491	15.035	23.476	0.164	4.475	0.974	0.000	100.258

Sample	SIO2	TIO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
HIGH Cr DIOPSIDES (KIMBERLITIC)											
(Cr2O3>1.5% wt.)											
01-JR-MA-014-003	55.600	0.117	0.336	1.733	16.660	23.405	0.059	1.740	1.064	0.000	100.714
01-JR-MA-014-006	54.884	0.299	3.175	2.581	15.275	20.033	0.084	1.504	2.495	0.000	100.330
01-JR-MA-014-011	55.440	0.229	3.158	2.619	15.346	20.212	0.055	1.396	2.500	0.002	100.957
01-JR-MA-014-013	55.017	0.102	0.366	1.603	16.510	22.497	0.081	2.455	1.283	0.004	99.918
01-JR-MA-014-016	54.335	0.169	2.294	2.350	15.752	20.761	0.084	1.736	2.236	0.004	99.721
01-JR-MA-014-017	54.733	0.171	3.221	2.619	15.115	20.202	0.057	1.472	2.559	0.001	100.150
01-JR-MA-048-004	54.472	0.015	1.498	1.890	14.328	21.827	0.201	4.620	1.594	0.001	100.446
01-JR-MA-097-011	54.688	0.149	2.986	1.612	15.871	21.056	0.068	1.601	2.029	0.000	100.060
01-JR-MA-109-001	53.937	0.061	2.250	1.809	13.460	20.665	0.148	5.061	2.193	0.000	99.584
01-JR-MA-114-002	53.503	0.031	2.298	1.697	13.622	21.404	0.161	4.736	1.942	0.000	99.394
01-JR-MA-120-008	53.863	0.040	2.661	1.763	13.132	21.246	0.229	5.173	1.901	0.000	100.008
01-JR-MA-120-010	54.189	0.013	1.917	1.877	13.687	21.637	0.178	4.567	1.847	0.002	99.914
01-JR-MA-129-009	53.052	0.023	1.578	1.628	14.086	21.533	0.303	4.980	1.570	0.000	98.753
01-JR-MA-148-002	55.106	0.071	0.307	1.832	16.507	22.559	0.099	2.170	1.404	0.000	100.055
01-JR-MA-149-002	54.533	0.072	2.824	2.320	15.641	20.520	0.070	1.494	2.177	0.000	99.651
01-JR-MA-149-003	55.445	0.070	1.774	1.916	16.102	21.371	0.069	1.923	1.895	0.000	100.565
01-JR-MA-162-017	54.229	0.144	0.580	1.755	17.040	21.640	0.087	2.338	1.155	0.018	98.986
01-JR-MA-165-044	55.134	0.232	0.373	2.229	16.342	21.542	0.105	3.205	1.574	0.010	100.746
01-JR-MA-167-014	55.645	0.028	2.555	2.155	15.644	20.880	0.059	1.433	2.049	0.001	100.449
01-JR-MA-173-011	54.387	0.369	1.903	1.729	17.209	20.451	0.111	2.755	1.314	0.009	100.237
01-JR-MA-175-004	55.107	0.081	0.248	1.766	16.187	23.068	0.062	2.312	1.104	0.000	99.935
01-JR-MA-180-030	55.434	0.090	2.943	2.251	15.646	20.799	0.066	1.266	2.193	0.000	100.688
01-JR-MA-180-055	53.593	0.773	0.599	1.513	16.575	20.595	0.127	4.025	1.227	0.000	99.027
01-JR-MA-181-023	55.670	0.100	0.280	2.185	16.419	22.709	0.069	2.146	1.439	0.008	101.025
01-JR-MA-182-026	54.052	0.321	1.982	1.521	16.909	20.758	0.101	2.675	1.439	0.004	99.762
01-JR-MA-187-007	54.854	0.023	2.375	1.750	16.244	21.798	0.072	1.778	1.621	0.000	100.515
01-JR-MA-247-001	55.369	0.102	2.796	1.857	15.924	20.996	0.070	1.737	1.961	0.001	100.813
01-JR-SG-001-136	55.573	0.261	2.213	2.122	16.362	19.562	0.083	2.412	2.146	0.014	100.748
01-JR-SG-001-137	55.185	0.224	3.488	2.005	15.463	20.619	0.069	1.360	2.280	0.000	100.693
01-JR-SG-001-138	55.310	0.159	2.323	4.855	13.859	17.054	0.092	2.757	3.978	0.001	100.388
01-JR-SG-001-139	55.325	0.147	2.889	2.309	15.308	20.362	0.065	1.542	2.331	0.007	100.285
01-JR-SG-011-003	54.934	0.161	1.985	1.533	15.727	21.966	0.067	2.342	1.766	0.003	100.484
01-JR-TM-008-001	55.308	0.158	2.544	1.958	16.007	21.229	0.059	1.454	1.972	0.000	100.689

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
Cr DIOPSIDES (NON KIMBERLITIC)											
(0.5<Cr2O3<1.5)											
01-JR-BD-001-005	53.497	0.428	1.262	1.084	17.098	21.091	0.126	5.168	0.457	0.003	100.214
01-JR-BD-001-006	53.512	0.186	0.842	0.516	18.088	21.118	0.132	4.720	0.207	0.000	99.321
01-JR-BD-001-007	53.389	0.332	0.922	1.049	18.003	19.861	0.141	5.447	0.475	0.000	99.619
01-JR-BD-001-008	53.482	0.246	0.838	0.909	18.409	19.133	0.165	5.606	0.470	0.001	99.259
01-JR-BD-001-009	53.381	0.319	1.199	1.086	17.262	20.595	0.132	5.272	0.529	0.002	99.777
01-JR-BD-001-011	53.616	0.181	1.480	0.995	17.167	22.832	0.104	3.022	0.434	0.007	99.838
01-JR-MA-004-002	53.649	0.330	3.286	0.874	15.844	22.589	0.033	2.384	1.213	0.000	100.202
01-JR-MA-005-005	53.293	0.056	3.142	0.693	14.634	21.552	0.125	4.401	1.616	0.000	99.512
01-JR-MA-007-002	54.576	0.028	0.724	0.705	14.974	23.586	0.194	4.692	1.048	0.000	100.527
01-JR-MA-008-002	53.175	0.200	3.685	0.500	14.720	22.141	0.070	5.301	0.876	0.002	100.670
01-JR-MA-010-023	51.640	0.041	4.636	0.761	15.196	17.731	0.186	7.184	1.273	0.191	98.839
01-JR-MA-012-004	55.352	0.021	3.167	1.200	20.782	11.539	0.120	4.488	0.829	0.100	97.598
01-JR-MA-014-009	54.398	0.286	0.823	0.978	18.640	19.253	0.162	5.564	0.450	0.000	100.554
01-JR-MA-014-015	54.722	0.140	0.444	0.865	16.392	22.373	0.093	3.343	1.338	0.001	99.711
01-JR-MA-014-033	38.937	0.103	33.631	0.572	0.022	24.275	0.022	2.050	0.000	0.000	99.612
01-JR-MA-016-007	53.673	0.000	1.654	0.291	14.677	23.041	0.172	4.373	1.356	0.000	99.237
01-JR-MA-018-004	53.786	0.140	4.453	0.501	19.001	13.045	0.115	5.866	0.697	0.304	97.908
01-JR-MA-018-005	38.699	0.815	20.551	1.444	0.145	34.844	0.764	3.597	0.006	0.003	100.868
01-JR-MA-020-001	56.620	0.017	1.525	0.663	21.460	11.957	0.131	3.963	0.613	0.165	97.114
01-JR-MA-058-004	54.261	0.185	1.058	0.830	16.624	24.490	0.067	2.575	0.390	0.000	100.480
01-JR-MA-074-012	53.873	0.261	0.723	1.004	19.248	18.148	0.175	5.426	0.448	0.000	99.306
01-JR-MA-074-013	53.176	0.323	0.937	1.124	18.514	19.205	0.157	5.461	0.494	0.000	99.391
01-JR-MA-074-014	52.975	0.362	0.991	1.374	18.112	19.299	0.152	5.294	0.469	0.000	99.028
01-JR-MA-079-013	53.169	0.064	1.975	0.578	14.953	23.197	0.168	4.057	0.968	0.000	99.129
01-JR-MA-087-011	53.038	0.043	3.256	0.563	13.268	22.160	0.291	5.689	1.341	0.000	99.649
01-JR-MA-088-008	55.248	0.084	2.606	0.986	21.975	11.620	0.081	3.021	0.728	0.086	96.435
01-JR-MA-097-010	53.483	0.369	0.887	1.114	18.708	18.428	0.172	5.849	0.486	0.003	99.499
01-JR-MA-098-004	53.209	0.340	1.112	1.328	17.294	20.363	0.122	4.771	0.528	0.000	99.067
01-JR-MA-100-003	53.322	0.346	0.921	1.189	18.379	18.702	0.142	5.558	0.496	0.000	99.055
01-JR-MA-100-004	53.636	0.373	0.956	0.996	17.705	19.903	0.146	5.530	0.476	0.000	99.721
01-JR-MA-100-005	54.351	0.300	0.777	0.992	19.074	18.113	0.183	5.927	0.444	0.005	100.166
01-JR-MA-100-006	54.091	0.135	1.664	1.161	17.427	22.189	0.084	2.613	0.487	0.010	99.861
01-JR-MA-100-007	52.929	0.006	2.817	1.492	17.941	22.127	0.069	2.216	0.118	0.000	99.715
01-JR-MA-100-008	53.619	0.353	0.879	1.066	17.943	19.659	0.145	5.375	0.480	0.000	99.519
01-JR-MA-100-010	53.200	0.348	1.374	1.305	16.763	20.479	0.139	5.323	0.578	0.000	99.509
01-JR-MA-100-011	53.933	0.197	1.628	1.443	16.195	23.201	0.061	2.703	0.848	0.004	100.213
01-JR-MA-100-012	52.966	0.140	2.704	1.156	18.232	20.210	0.134	4.052	0.132	0.000	99.726
01-JR-MA-100-013	53.594	0.168	1.025	1.260	16.442	23.170	0.108	3.109	0.547	0.000	99.423

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-100-014	52.761	0.357	1.286	1.172	17.260	20.466	0.125	5.054	0.500	0.000	98.981
01-JR-MA-100-015	53.076	0.312	0.660	0.876	18.282	19.457	0.158	5.320	0.432	0.000	98.573
01-JR-MA-100-016	53.611	0.357	0.785	0.928	17.935	19.516	0.152	5.571	0.467	0.001	99.323
01-JR-MA-100-017	53.910	0.301	0.788	0.932	18.354	19.418	0.161	5.211	0.439	0.001	99.515
01-JR-MA-102-007	53.378	0.301	0.917	1.210	18.066	19.181	0.165	5.380	0.459	0.000	99.057
01-JR-MA-120-012	54.698	0.040	1.022	0.547	15.380	23.383	0.180	4.244	1.116	0.000	100.610
01-JR-MA-123-024	53.149	0.383	0.795	0.981	17.878	19.167	0.159	5.454	0.466	0.000	98.432
01-JR-MA-123-025	53.313	0.298	0.921	1.129	17.902	18.820	0.157	5.517	0.503	0.007	98.567
01-JR-MA-123-029	53.444	0.067	0.967	0.748	17.967	21.635	0.132	3.284	0.247	0.000	98.491
01-JR-MA-123-030	52.970	0.301	0.885	1.115	17.927	19.060	0.159	5.448	0.468	0.001	98.334
01-JR-MA-123-031	53.469	0.123	1.417	0.617	17.889	21.065	0.132	4.108	0.429	0.000	99.249
01-JR-MA-126-009	53.186	0.216	1.026	1.230	18.710	18.173	0.162	5.475	0.590	0.003	98.771
01-JR-MA-129-013	52.977	0.356	0.993	1.015	17.267	20.535	0.136	5.220	0.501	0.000	99.000
01-JR-MA-130-006	53.942	0.315	1.075	1.131	17.187	20.227	0.144	5.315	0.538	0.000	99.874
01-JR-MA-134-008	53.293	0.336	0.897	1.241	18.191	19.223	0.144	5.262	0.486	0.000	99.073
01-JR-MA-135-033	53.022	0.334	0.723	0.960	18.021	19.053	0.165	5.319	0.434	0.000	98.031
01-JR-MA-135-034	52.935	0.329	0.874	1.153	17.814	19.108	0.153	5.430	0.487	0.003	98.286
01-JR-MA-135-035	52.756	0.354	0.951	1.304	17.100	19.852	0.133	4.880	0.528	0.000	97.858
01-JR-MA-135-036	53.285	0.321	0.684	0.869	18.015	18.771	0.153	5.414	0.402	0.009	97.923
01-JR-MA-135-037	53.475	0.281	0.837	1.064	18.416	19.139	0.155	5.344	0.477	0.002	99.190
01-JR-MA-135-038	53.334	0.334	0.927	1.171	17.952	19.757	0.142	5.219	0.479	0.000	99.315
01-JR-MA-135-040	52.490	0.327	0.992	0.852	18.130	17.761	0.145	5.837	0.443	0.002	96.979
01-JR-MA-135-041	53.561	0.322	0.888	1.193	17.847	19.261	0.151	5.309	0.495	0.003	99.030
01-JR-MA-135-043	52.936	0.325	0.929	1.195	17.742	19.446	0.134	5.290	0.498	0.000	98.495
01-JR-MA-135-044	53.167	0.282	0.884	1.098	18.498	18.734	0.183	5.771	0.464	0.000	99.081
01-JR-MA-135-045	53.453	0.283	0.724	0.880	18.193	19.812	0.148	5.233	0.438	0.000	99.164
01-JR-MA-135-046	53.109	0.310	0.735	0.977	18.169	19.606	0.152	5.160	0.464	0.002	98.684
01-JR-MA-135-049	51.274	0.269	3.131	1.089	17.534	19.355	0.152	5.525	0.264	0.003	98.596
01-JR-MA-135-050	52.247	0.192	2.386	0.954	17.830	19.217	0.170	5.378	0.267	0.001	98.642
01-JR-MA-135-053	53.312	0.337	0.906	1.086	17.881	19.550	0.155	5.352	0.486	0.002	99.067
01-JR-MA-136-007	52.933	0.277	0.865	1.279	18.042	19.545	0.150	5.145	0.495	0.000	98.731
01-JR-MA-136-009	53.643	0.186	2.685	0.966	17.850	15.727	0.122	5.085	0.631	0.188	97.083
01-JR-MA-137-003	53.127	0.331	0.956	1.308	18.448	18.847	0.154	5.482	0.537	0.000	99.190
01-JR-MA-139-014	53.004	0.384	1.016	1.241	18.418	19.435	0.152	5.407	0.483	0.000	99.540
01-JR-MA-139-015	53.344	0.348	0.752	0.885	18.518	18.914	0.174	5.648	0.420	0.002	99.005
01-JR-MA-140-006	53.467	0.235	1.007	0.920	17.513	20.757	0.137	4.950	0.237	0.002	99.225
01-JR-MA-140-007	53.191	0.361	0.972	1.188	17.435	19.599	0.133	5.268	0.489	0.003	98.639
01-JR-MA-141-005	52.593	0.320	0.940	1.122	17.422	19.274	0.157	5.470	0.489	0.000	97.787
01-JR-MA-141-006	53.654	0.096	1.516	0.959	16.182	23.087	0.107	3.096	0.608	0.000	99.305
01-JR-MA-141-007	53.319	0.350	0.768	1.011	17.630	19.396	0.137	5.354	0.460	0.000	98.425

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-141-008	52.775	0.291	1.321	1.040	17.873	18.756	0.151	5.476	0.427	0.000	98.110
01-JR-MA-141-009	53.015	0.306	0.769	1.016	17.858	19.389	0.145	5.214	0.447	0.000	98.159
01-JR-MA-142-006	52.629	0.326	0.891	1.157	17.541	19.091	0.150	5.299	0.500	0.001	97.585
01-JR-MA-142-007	53.700	0.297	0.608	0.924	18.569	18.722	0.165	5.331	0.425	0.000	98.741
01-JR-MA-142-008	52.506	0.307	0.906	1.050	18.194	19.423	0.138	5.393	0.425	0.004	98.346
01-JR-MA-142-009	52.629	0.372	0.718	0.973	17.842	19.422	0.140	5.226	0.476	0.000	97.798
01-JR-MA-142-010	53.249	0.286	1.148	1.016	18.297	18.140	0.162	5.572	0.426	0.003	98.299
01-JR-MA-142-011	53.063	0.289	0.793	1.052	17.571	19.768	0.136	5.156	0.451	0.000	98.279
01-JR-MA-142-012	52.818	0.358	0.963	1.142	17.631	19.340	0.151	5.509	0.514	0.000	98.426
01-JR-MA-142-013	52.938	0.356	0.921	1.097	17.770	19.219	0.142	5.229	0.481	0.001	98.154
01-JR-MA-143-010	48.974	0.248	3.385	1.416	18.733	14.282	0.187	8.078	0.437	0.000	95.740
01-JR-MA-143-011	53.353	0.330	0.830	1.161	18.427	18.680	0.161	5.417	0.491	0.001	98.851
01-JR-MA-144-018	53.111	0.326	0.851	1.128	18.089	18.426	0.165	5.773	0.512	0.004	98.385
01-JR-MA-144-019	52.587	0.316	0.771	1.090	17.803	20.123	0.144	5.130	0.431	0.001	98.396
01-JR-MA-144-020	52.904	0.306	0.840	1.090	18.553	18.383	0.156	5.657	0.450	0.000	98.339
01-JR-MA-144-022	53.057	0.343	0.772	0.974	17.769	19.249	0.145	5.374	0.469	0.000	98.152
01-JR-MA-144-023	53.594	0.368	0.985	1.124	17.802	19.204	0.155	5.486	0.476	0.002	99.196
01-JR-MA-144-024	52.661	0.359	0.858	1.102	17.568	19.303	0.139	5.167	0.445	0.000	97.602
01-JR-MA-146-007	52.737	0.288	0.789	0.977	17.735	19.667	0.136	5.307	0.458	0.000	98.094
01-JR-MA-147-006	53.072	0.359	0.997	1.060	17.899	19.480	0.140	5.518	0.493	0.000	99.018
01-JR-MA-147-007	52.984	0.265	0.742	1.007	18.376	19.080	0.168	5.621	0.435	0.000	98.678
01-JR-MA-147-009	53.345	0.357	0.963	1.095	18.070	19.500	0.156	5.436	0.482	0.003	99.407
01-JR-MA-147-010	52.819	0.325	1.281	1.014	17.244	20.384	0.119	5.171	0.471	0.000	98.828
01-JR-MA-147-011	53.339	0.320	0.950	1.153	18.381	19.402	0.155	5.403	0.473	0.002	99.578
01-JR-MA-147-012	54.246	0.188	1.039	0.840	17.792	21.138	0.128	4.497	0.219	0.000	100.087
01-JR-MA-147-013	53.143	0.297	0.964	1.192	18.009	19.230	0.149	5.312	0.475	0.004	98.775
01-JR-MA-147-014	52.696	0.387	1.426	1.436	17.181	20.426	0.116	5.126	0.560	0.000	99.354
01-JR-MA-147-015	53.256	0.216	0.898	0.656	17.921	21.390	0.115	4.433	0.209	0.000	99.094
01-JR-MA-147-016	52.469	0.200	2.790	0.955	18.112	19.217	0.166	5.577	0.266	0.003	99.755
01-JR-MA-147-017	53.289	0.333	0.989	1.182	18.535	18.890	0.162	5.635	0.509	0.002	99.526
01-JR-MA-148-003	54.093	0.308	0.722	1.010	18.527	19.009	0.165	5.459	0.448	0.003	99.744
01-JR-MA-149-005	52.970	0.351	1.240	1.319	17.314	20.236	0.127	5.237	0.564	0.000	99.358
01-JR-MA-151-007	53.387	0.376	0.899	1.078	17.656	19.647	0.158	5.182	0.466	0.003	98.852
01-JR-MA-151-008	54.745	0.119	0.666	0.651	16.311	22.265	0.092	3.670	1.146	0.001	99.666
01-JR-MA-151-009	53.928	0.293	0.849	1.240	19.096	17.872	0.147	5.582	0.485	0.000	99.492
01-JR-MA-151-010	53.352	0.316	1.355	1.050	18.164	18.580	0.180	5.866	0.437	0.000	99.300
01-JR-MA-152-004	53.010	0.374	1.035	0.855	18.154	18.846	0.169	5.931	0.389	0.004	98.767
01-JR-MA-153-001	53.330	0.323	1.065	1.211	17.555	19.880	0.152	5.614	0.529	0.000	99.659
01-JR-MA-156-014	53.307	0.318	0.950	0.997	17.344	20.635	0.128	4.923	0.525	0.001	99.128
01-JR-MA-156-015	52.197	0.335	1.280	1.287	16.930	19.911	0.147	5.352	0.561	0.000	98.000

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-158-005	53.994	0.031	1.175	0.582	15.046	24.293	0.130	4.170	0.616	0.000	100.037
01-JR-MA-162-013	53.233	0.359	0.912	0.964	17.933	19.008	0.165	5.825	0.497	0.006	98.902
01-JR-MA-162-014	53.483	0.369	0.850	0.867	18.138	19.132	0.166	5.818	0.414	0.002	99.239
01-JR-MA-162-015	53.686	0.287	1.069	1.106	18.637	18.008	0.164	6.061	0.536	0.000	99.554
01-JR-MA-162-016	53.609	0.340	0.843	0.964	17.921	19.553	0.149	5.456	0.447	0.005	99.287
01-JR-MA-162-018	53.348	0.381	0.940	1.036	18.208	19.124	0.146	5.371	0.445	0.000	98.999
01-JR-MA-162-019	53.482	0.201	0.950	0.760	18.214	20.655	0.147	5.031	0.253	0.001	99.694
01-JR-MA-162-020	52.614	0.186	0.888	0.557	18.072	20.929	0.146	4.934	0.200	0.003	98.529
01-JR-MA-162-021	51.295	0.317	1.114	0.983	17.488	17.829	0.161	8.344	0.375	0.006	97.912
01-JR-MA-162-022	53.133	0.203	1.112	0.716	17.797	20.428	0.149	5.202	0.233	0.000	98.973
01-JR-MA-162-023	52.849	0.102	1.372	1.191	16.759	23.692	0.084	2.956	0.363	0.007	99.375
01-JR-MA-162-024	52.815	0.358	0.986	1.082	17.844	18.981	0.153	5.506	0.484	0.000	98.209
01-JR-MA-162-025	53.714	0.325	0.932	1.275	18.282	18.989	0.161	5.396	0.445	0.000	99.519
01-JR-MA-162-027	53.581	0.368	0.966	1.179	17.783	19.589	0.154	5.420	0.516	0.005	99.561
01-JR-MA-163-001	53.419	0.066	1.370	0.748	16.083	23.124	0.132	3.888	0.484	0.000	99.314
01-JR-MA-163-002	52.631	0.366	1.093	1.180	17.382	20.101	0.153	5.211	0.442	0.000	98.559
01-JR-MA-163-003	52.877	0.171	1.862	0.948	16.820	21.793	0.123	4.119	0.654	0.001	99.368
01-JR-MA-165-041	54.371	0.296	0.732	0.962	18.551	19.261	0.166	5.308	0.436	0.000	100.083
01-JR-MA-165-043	54.344	0.275	0.964	1.346	18.255	19.031	0.147	5.215	0.559	0.002	100.138
01-JR-MA-165-045	53.277	0.164	1.437	0.857	18.558	22.064	0.074	2.655	0.179	0.002	99.267
01-JR-MA-165-046	53.017	0.306	0.817	1.130	18.354	18.978	0.161	5.230	0.479	0.000	98.472
01-JR-MA-165-048	52.828	0.363	0.960	1.190	17.403	20.160	0.134	5.312	0.470	0.002	98.822
01-JR-MA-165-049	53.372	0.220	0.979	0.784	17.699	20.934	0.136	4.899	0.237	0.001	99.261
01-JR-MA-165-050	52.384	0.211	1.258	0.925	17.689	20.821	0.142	4.779	0.246	0.000	98.455
01-JR-MA-165-051	53.963	0.310	0.847	1.039	19.901	16.260	0.194	6.612	0.464	0.002	99.592
01-JR-MA-165-052	53.855	0.243	0.692	1.119	18.541	18.758	0.158	5.538	0.465	0.000	99.369
01-JR-MA-165-053	52.413	0.415	1.297	1.050	16.721	21.017	0.136	5.117	0.484	0.000	98.650
01-JR-MA-165-054	53.158	0.373	0.983	1.021	17.719	19.675	0.152	5.579	0.475	0.002	99.137
01-JR-MA-165-055	53.061	0.310	0.793	1.037	18.269	19.507	0.144	5.273	0.434	0.002	98.830
01-JR-MA-165-056	52.847	0.334	0.770	0.935	17.833	19.396	0.155	5.185	0.444	0.006	97.905
01-JR-MA-165-057	52.591	0.370	1.278	1.301	17.121	20.108	0.123	5.056	0.529	0.003	98.480
01-JR-MA-165-058	52.594	0.193	2.125	0.877	15.960	23.727	0.078	3.221	0.596	0.001	99.372
01-JR-MA-165-059	53.305	0.409	0.974	1.069	17.633	20.088	0.140	5.288	0.505	0.000	99.411
01-JR-MA-165-060	52.290	0.181	2.076	0.606	17.723	20.141	0.166	5.535	0.148	0.002	98.868
01-JR-MA-167-015	53.483	0.364	0.752	0.988	18.047	19.864	0.167	5.321	0.420	0.000	99.406
01-JR-MA-167-016	53.093	0.360	1.034	1.217	17.683	19.572	0.147	5.226	0.485	0.002	98.819
01-JR-MA-167-017	52.806	0.345	1.050	1.219	17.967	19.648	0.159	5.471	0.534	0.000	99.199
01-JR-MA-167-018	53.069	0.226	0.942	0.729	17.842	20.819	0.137	4.871	0.231	0.000	98.866
01-JR-MA-168-002	52.605	0.169	1.726	0.996	17.020	21.882	0.117	3.857	0.422	0.000	98.794
01-JR-MA-168-003	53.809	0.316	0.770	1.023	18.210	19.619	0.143	5.245	0.491	0.000	99.626

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-168-004	54.162	0.209	1.004	0.643	17.941	21.119	0.147	4.866	0.228	0.000	100.319
01-JR-MA-171-004	53.638	0.050	0.943	0.458	15.894	24.100	0.176	3.722	0.383	0.006	99.370
01-JR-MA-171-005	53.070	0.379	1.011	1.078	17.527	20.225	0.152	5.332	0.477	0.004	99.255
01-JR-MA-172-015	53.109	0.174	1.750	0.924	17.380	21.496	0.123	3.997	0.462	0.001	99.416
01-JR-MA-173-012	54.343	0.216	2.368	1.102	18.218	18.472	0.109	3.603	1.234	0.025	99.690
01-JR-MA-174-010	53.353	0.373	0.667	0.792	18.306	19.398	0.167	5.707	0.410	0.000	99.173
01-JR-MA-174-011	53.471	0.356	1.032	0.819	17.587	20.163	0.143	5.446	0.454	0.000	99.471
01-JR-MA-174-012	52.964	0.270	0.876	1.098	18.377	19.159	0.155	5.198	0.501	0.000	98.598
01-JR-MA-174-013	52.630	0.147	1.229	0.897	17.233	23.046	0.099	3.300	0.262	0.000	98.843
01-JR-MA-175-005	53.025	0.348	0.762	1.023	18.490	18.633	0.154	5.616	0.409	0.005	98.465
01-JR-MA-175-006	53.523	0.170	1.416	0.781	17.251	23.016	0.100	3.231	0.388	0.000	99.876
01-JR-MA-175-007	53.313	0.393	1.077	1.205	17.941	19.514	0.148	5.454	0.523	0.003	99.571
01-JR-MA-176-004	53.223	0.324	0.768	0.983	17.673	19.833	0.144	5.551	0.481	0.008	98.988
01-JR-MA-176-005	52.754	0.353	0.937	1.014	17.419	20.399	0.140	5.344	0.460	0.000	98.820
01-JR-MA-177-002	53.492	0.325	0.704	0.873	18.518	18.917	0.154	5.629	0.443	0.005	99.060
01-JR-MA-178-001	53.801	0.215	0.829	1.160	19.245	17.560	0.175	5.806	0.533	0.000	99.324
01-JR-MA-179-005	52.884	0.377	0.932	1.080	18.179	18.956	0.162	5.594	0.484	0.000	98.648
01-JR-MA-179-006	53.265	0.347	0.719	0.875	17.759	19.965	0.138	5.209	0.412	0.000	98.689
01-JR-MA-179-007	53.120	0.293	0.764	1.104	18.868	18.059	0.160	5.529	0.501	0.000	98.398
01-JR-MA-179-008	52.833	0.347	1.027	1.198	17.761	19.312	0.166	5.481	0.496	0.000	98.621
01-JR-MA-179-009	52.771	0.311	0.959	1.227	17.615	19.732	0.143	5.328	0.511	0.000	98.597
01-JR-MA-180-032	53.237	0.365	0.809	0.985	17.811	19.760	0.152	5.504	0.460	0.000	99.083
01-JR-MA-180-033	53.487	0.306	0.781	0.980	17.785	19.596	0.141	5.299	0.449	0.004	98.828
01-JR-MA-180-034	52.584	0.309	0.916	1.185	18.188	18.781	0.158	5.493	0.506	0.001	98.121
01-JR-MA-180-035	52.074	0.044	3.279	1.386	17.717	21.515	0.101	3.082	0.104	0.000	99.302
01-JR-MA-180-036	53.326	0.293	0.668	0.827	18.361	18.523	0.178	5.940	0.428	0.000	98.544
01-JR-MA-180-037	52.494	0.375	0.911	1.224	17.768	19.646	0.140	5.242	0.506	0.002	98.308
01-JR-MA-180-038	53.131	0.348	0.959	0.983	17.793	19.377	0.152	5.581	0.482	0.000	98.806
01-JR-MA-180-039	52.881	0.313	0.901	1.184	17.510	19.972	0.134	5.091	0.521	0.000	98.507
01-JR-MA-180-040	53.060	0.348	0.764	1.004	17.970	19.855	0.141	5.328	0.433	0.000	98.903
01-JR-MA-180-041	52.692	0.210	1.059	0.880	17.693	20.789	0.149	4.978	0.233	0.000	98.683
01-JR-MA-180-042	52.925	0.339	0.818	0.782	17.660	19.820	0.146	5.726	0.435	0.000	98.651
01-JR-MA-180-043	52.666	0.366	0.999	1.112	17.621	19.525	0.155	5.599	0.507	0.000	98.550
01-JR-MA-180-044	53.596	0.304	0.714	1.011	18.409	18.950	0.151	5.273	0.451	0.000	98.859
01-JR-MA-180-045	53.313	0.361	1.064	1.218	17.129	20.718	0.145	4.934	0.525	0.006	99.413
01-JR-MA-180-046	52.844	0.379	0.757	1.097	18.396	18.693	0.180	5.793	0.504	0.000	98.643
01-JR-MA-180-047	53.007	0.378	0.801	0.827	18.028	18.950	0.164	5.939	0.470	0.000	98.564
01-JR-MA-180-048	52.830	0.340	0.941	1.160	17.789	19.528	0.145	5.621	0.520	0.000	98.874
01-JR-MA-180-049	53.031	0.342	0.855	1.118	18.264	19.306	0.157	5.265	0.420	0.000	98.758
01-JR-MA-180-050	52.412	0.408	0.936	1.058	17.250	19.972	0.137	5.610	0.485	0.000	98.268

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-180-051	52.801	0.313	0.914	1.112	17.970	19.195	0.157	5.572	0.462	0.000	98.496
01-JR-MA-180-052	53.048	0.225	1.039	0.801	17.850	20.814	0.131	4.655	0.259	0.001	98.823
01-JR-MA-180-054	53.186	0.299	0.785	1.128	18.369	19.291	0.157	5.142	0.489	0.000	98.846
01-JR-MA-180-057	54.691	0.310	0.747	0.990	18.518	19.263	0.159	5.525	0.467	0.005	100.675
01-JR-MA-180-058	54.055	0.322	0.860	1.008	18.458	19.446	0.152	5.374	0.497	0.000	100.172
01-JR-MA-181-024	53.101	0.365	0.823	0.882	17.958	19.792	0.166	5.614	0.394	0.006	99.101
01-JR-MA-181-025	52.681	0.348	1.023	1.113	17.696	19.783	0.139	5.532	0.486	0.000	98.801
01-JR-MA-181-026	54.712	0.096	4.353	0.251	14.129	18.866	0.085	3.860	2.716	0.007	99.075
01-JR-MA-181-028	53.200	0.346	0.836	1.001	17.537	19.979	0.156	5.479	0.441	0.006	98.981
01-JR-MA-181-029	53.311	0.348	0.940	1.170	18.529	18.843	0.155	5.553	0.482	0.000	99.331
01-JR-MA-181-030	52.924	0.289	1.495	0.781	18.688	19.241	0.135	5.505	0.395	0.000	99.453
01-JR-MA-181-031	53.220	0.328	0.877	1.031	18.361	19.110	0.131	5.374	0.463	0.000	98.895
01-JR-MA-183-009	53.555	0.249	1.455	0.715	17.185	23.041	0.084	2.919	0.380	0.004	99.587
01-JR-MA-185-002	52.556	0.196	1.150	0.951	17.440	20.827	0.142	5.015	0.263	0.000	98.540
01-JR-MA-185-003	53.836	0.280	1.446	1.050	18.847	17.848	0.172	6.144	0.434	0.000	100.057
01-JR-MA-188-015	52.763	0.389	1.196	1.039	17.164	21.222	0.122	4.968	0.451	0.000	99.314
01-JR-MA-188-016	52.854	0.382	0.950	0.954	17.745	20.045	0.161	5.508	0.501	0.001	99.101
01-JR-MA-188-017	53.565	0.403	0.889	1.087	17.748	19.913	0.145	5.209	0.474	0.000	99.433
01-JR-MA-188-018	53.423	0.279	0.978	0.961	17.509	20.580	0.130	5.097	0.488	0.000	99.445
01-JR-MA-189-004	53.232	0.301	0.871	1.026	17.773	19.862	0.160	5.367	0.462	0.000	99.054
01-JR-MA-189-005	53.809	0.182	1.036	0.900	17.690	21.094	0.113	4.525	0.246	0.004	99.599
01-JR-MA-189-006	53.944	0.302	0.956	1.038	18.833	18.092	0.177	6.154	0.478	0.002	99.976
01-JR-MA-189-007	53.795	0.204	0.937	0.722	17.976	21.097	0.147	4.931	0.228	0.000	100.037
01-JR-MA-190-001	53.413	0.299	0.796	1.036	17.956	19.792	0.139	5.147	0.452	0.000	99.030
01-JR-MA-191-005	53.141	0.204	0.963	0.588	17.777	21.202	0.142	4.758	0.218	0.005	98.998
01-JR-MA-192-002	52.800	0.312	0.912	1.101	17.733	19.586	0.148	5.424	0.485	0.000	98.501
01-JR-MA-193-004	52.184	0.409	1.286	1.235	16.648	20.660	0.127	5.185	0.548	0.000	98.282
01-JR-MA-193-005	52.067	0.233	1.003	0.749	17.319	20.810	0.133	4.474	0.245	0.002	97.035
01-JR-MA-195-011	51.663	0.357	0.743	1.062	17.443	19.437	0.148	5.344	0.454	0.000	96.651
01-JR-MA-195-012	52.225	0.312	0.917	1.202	18.394	18.269	0.170	5.542	0.463	0.003	97.497
01-JR-MA-195-013	51.952	0.295	0.890	1.215	17.545	19.136	0.138	5.327	0.480	0.000	96.978
01-JR-MA-195-014	52.495	0.308	0.687	0.871	17.918	18.642	0.167	5.571	0.411	0.000	97.070
01-JR-MA-195-015	52.080	0.396	0.826	0.793	17.103	18.973	0.167	6.108	0.430	0.000	96.876
01-JR-MA-195-016	52.298	0.330	0.927	1.171	17.961	18.922	0.139	5.162	0.506	0.000	97.416
01-JR-MA-195-017	52.393	0.312	0.722	1.013	17.446	19.450	0.154	5.342	0.455	0.000	97.287
01-JR-MA-195-018	51.357	0.177	2.803	1.132	15.835	20.580	0.109	3.798	1.144	0.000	96.935
01-JR-MA-195-019	52.644	0.305	0.918	1.328	18.122	18.155	0.148	5.508	0.516	0.000	97.644
01-JR-MA-195-020	52.541	0.327	0.795	1.012	17.944	18.600	0.155	5.313	0.420	0.000	97.107
01-JR-MA-200-002	52.759	0.259	1.037	0.987	19.019	17.451	0.166	5.829	0.411	0.000	97.918
01-JR-MA-200-003	52.511	0.266	1.313	1.113	18.398	18.209	0.161	5.661	0.460	0.000	98.092

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-200-004	54.184	0.264	1.183	1.023	19.101	18.295	0.163	5.837	0.438	0.000	100.488
01-JR-MA-200-005	53.351	0.304	1.459	1.014	18.347	18.331	0.162	6.077	0.467	0.000	99.512
01-JR-MA-207-002	52.132	0.194	1.234	0.709	16.949	21.918	0.100	3.402	0.376	0.000	97.014
01-JR-MA-210-013	53.265	0.357	0.958	0.987	18.181	19.163	0.176	5.724	0.487	0.007	99.305
01-JR-MA-210-016	53.896	0.313	0.734	1.013	18.414	19.434	0.170	5.374	0.497	0.004	99.849
01-JR-MA-210-017	54.492	0.274	0.825	1.047	19.060	18.447	0.176	5.780	0.491	0.002	100.594
01-JR-MA-211-002	52.700	0.301	0.893	1.071	18.536	18.114	0.173	5.967	0.476	0.003	98.239
01-JR-MA-211-004	52.230	0.232	0.954	0.746	17.883	20.869	0.135	4.816	0.229	0.001	98.095
01-JR-MA-211-005	52.962	0.221	1.461	0.736	17.084	23.175	0.102	3.158	0.280	0.003	99.182
01-JR-MA-214-048	52.270	0.358	0.907	1.036	17.535	19.667	0.137	5.536	0.441	0.000	97.887
01-JR-MA-214-049	52.335	0.326	0.972	1.175	18.031	19.182	0.159	5.497	0.513	0.004	98.194
01-JR-MA-214-050	52.445	0.263	1.228	0.888	17.705	21.018	0.143	4.459	0.266	0.000	98.415
01-JR-MA-214-051	53.007	0.216	0.986	0.955	18.026	21.130	0.121	4.387	0.259	0.002	99.089
01-JR-MA-214-052	52.409	0.377	0.993	1.162	17.734	19.492	0.154	5.525	0.499	0.000	98.345
01-JR-MA-214-053	52.180	0.338	0.986	1.051	17.813	18.955	0.157	5.861	0.513	0.000	97.854
01-JR-MA-214-054	52.299	0.364	0.989	1.075	17.683	19.868	0.151	5.518	0.488	0.000	98.435
01-JR-MA-214-055	53.049	0.113	1.066	1.268	17.618	21.936	0.090	2.856	0.544	0.000	98.540
01-JR-MA-217-012	53.186	0.358	0.969	1.111	17.515	19.299	0.162	5.598	0.505	0.005	98.708
01-JR-MA-217-013	53.035	0.273	0.860	1.043	18.545	18.627	0.170	5.741	0.446	0.001	98.741
01-JR-MA-217-014	52.380	0.384	1.072	1.251	18.232	18.324	0.176	5.996	0.499	0.002	98.316
01-JR-MA-217-017	52.937	0.308	0.779	1.051	17.838	19.769	0.139	5.268	0.458	0.001	98.548
01-JR-MA-218-028	54.324	0.082	0.521	0.591	16.868	22.956	0.085	2.985	0.969	0.001	99.382
01-JR-MA-218-031	54.087	0.247	0.779	1.021	18.355	19.077	0.162	5.297	0.449	0.003	99.477
01-JR-MA-221-006	52.773	0.341	1.486	1.379	18.315	18.749	0.169	5.458	0.456	0.000	99.126
01-JR-MA-226-003	53.358	0.292	1.413	1.341	17.326	19.966	0.148	5.385	0.617	0.000	99.846
01-JR-MA-226-004	53.269	0.308	1.318	1.370	17.355	20.344	0.140	5.130	0.577	0.003	99.814
01-JR-MA-230-004	53.571	0.327	0.812	1.015	18.136	19.622	0.158	5.342	0.497	0.004	99.484
01-JR-MA-230-005	53.559	0.282	1.094	0.903	18.364	18.970	0.169	5.972	0.547	0.003	99.863
01-JR-MA-230-006	53.537	0.288	0.907	1.068	18.198	18.951	0.161	5.517	0.465	0.003	99.095
01-JR-MA-236-001	53.216	0.102	2.669	0.019	14.705	22.576	0.344	4.916	1.507	0.000	100.054
01-JR-MA-243-004	53.701	0.278	1.227	1.400	17.481	20.112	0.141	5.027	0.629	0.000	99.996
01-JR-MA-244-001	54.312	0.033	1.351	0.014	16.605	23.340	0.684	2.763	1.062	0.004	100.168
01-JR-MA-244-002	53.470	0.304	0.908	1.096	18.253	19.027	0.173	5.522	0.499	0.000	99.252
01-JR-MA-245-005	53.609	0.239	0.944	0.945	19.088	18.814	0.163	5.328	0.387	0.000	99.517
01-JR-MA-245-006	54.007	0.121	1.040	0.620	17.327	22.413	0.122	3.845	0.279	0.002	99.776
01-JR-MA-245-007	53.728	0.330	0.945	1.218	17.792	19.300	0.148	5.312	0.496	0.005	99.274
01-JR-MA-253-017	53.872	0.400	1.029	1.033	17.596	19.924	0.163	5.642	0.524	0.000	100.183
01-JR-MA-253-018	53.553	0.270	0.734	1.110	19.435	17.916	0.168	5.611	0.456	0.003	99.256
01-JR-MA-253-019	53.458	0.197	1.500	1.159	16.438	23.324	0.050	2.706	0.806	0.002	99.640
01-JR-MA-253-021	53.345	0.339	1.084	1.114	17.962	19.549	0.152	5.513	0.504	0.000	99.562

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-253-022	53.762	0.298	0.744	1.041	18.906	18.426	0.181	5.654	0.457	0.005	99.474
01-JR-MA-254-009	53.256	0.384	0.954	1.160	18.017	19.030	0.156	5.653	0.482	0.000	99.092
01-JR-MA-254-010	53.501	0.270	0.769	1.065	18.228	19.622	0.158	5.300	0.472	0.000	99.385
01-JR-MA-254-011	54.462	0.334	0.827	0.884	18.696	19.756	0.154	5.118	0.357	0.000	100.588
01-JR-MA-254-012	53.533	0.298	0.766	0.948	18.368	19.310	0.154	5.524	0.450	0.001	99.352
01-JR-MA-254-013	53.993	0.315	1.196	0.966	18.545	18.896	0.184	5.744	0.447	0.000	100.286
01-JR-MA-254-014	53.322	0.342	0.969	1.138	18.547	19.080	0.156	5.555	0.485	0.000	99.594
01-JR-MA-254-015	53.734	0.230	1.386	0.695	17.319	23.370	0.085	3.155	0.331	0.000	100.305
01-JR-MA-254-016	53.591	0.327	1.189	0.969	18.317	19.788	0.143	5.304	0.435	0.005	100.068
01-JR-MA-254-017	54.328	0.309	0.722	0.926	17.829	20.178	0.149	5.308	0.417	0.000	100.166
01-JR-MA-255-006	53.996	0.294	0.731	0.947	18.303	19.109	0.168	5.721	0.431	0.000	99.700
01-JR-MA-255-007	53.455	0.402	1.077	1.214	17.850	19.882	0.159	5.428	0.510	0.003	99.980
01-JR-MA-255-008	53.832	0.335	0.802	1.009	18.098	19.849	0.147	5.330	0.468	0.002	99.872
01-JR-MA-255-009	54.399	0.291	0.806	0.934	19.070	18.590	0.157	5.575	0.466	0.002	100.290
01-JR-MA-255-010	53.682	0.299	0.895	1.051	18.923	18.658	0.168	5.906	0.462	0.001	100.045
01-JR-MA-255-011	53.536	0.421	1.084	1.195	18.433	19.065	0.150	5.732	0.476	0.001	100.093
01-JR-MA-256-006	53.029	0.411	1.043	1.099	17.940	19.333	0.161	5.967	0.522	0.000	99.505
01-JR-MA-256-007	53.281	0.400	1.137	1.196	18.240	19.235	0.152	5.460	0.491	0.006	99.598
01-JR-SG-001-140	53.670	0.222	0.910	0.801	17.972	21.110	0.152	4.785	0.238	0.001	99.861
01-JR-SG-001-141	53.510	0.338	0.752	0.893	18.511	18.817	0.171	5.823	0.441	0.000	99.256
01-JR-SG-001-142	53.627	0.338	1.000	1.114	18.342	18.838	0.160	5.843	0.531	0.002	99.795
01-JR-SG-001-143	53.783	0.346	0.900	1.098	17.814	19.551	0.154	5.270	0.485	0.004	99.405
01-JR-SG-001-145	53.754	0.296	0.919	1.098	18.239	19.321	0.145	5.587	0.519	0.003	99.881
01-JR-SG-001-146	55.141	0.223	2.058	0.717	20.056	17.136	0.119	3.675	1.131	0.034	100.290
01-JR-SG-001-148	53.644	0.384	0.896	0.827	18.386	19.110	0.179	5.985	0.469	0.000	99.880
01-JR-SG-001-149	53.918	0.357	1.108	1.162	17.780	19.738	0.160	5.524	0.488	0.007	100.242
01-JR-SG-002-001	53.571	0.387	0.892	0.930	18.041	19.931	0.162	5.653	0.456	0.000	100.023
01-JR-SG-002-002	53.622	0.342	0.987	1.124	17.691	20.268	0.154	5.367	0.499	0.000	100.054
01-JR-SG-002-003	54.334	0.234	0.659	0.914	19.167	18.689	0.183	5.610	0.419	0.007	100.216
01-JR-SG-002-004	53.990	0.309	0.691	0.893	18.120	19.390	0.163	5.557	0.449	0.000	99.562
01-JR-SG-002-005	53.593	0.376	0.909	0.979	18.018	19.529	0.161	5.600	0.449	0.004	99.621
01-JR-SG-002-006	53.090	0.344	1.284	1.264	17.136	20.840	0.123	4.972	0.545	0.000	99.598
01-JR-SG-002-007	52.606	0.186	2.573	1.093	19.198	17.548	0.194	6.154	0.213	0.001	99.766
01-JR-SG-006-001	54.459	0.297	0.639	0.733	18.554	19.157	0.156	5.589	0.408	0.002	99.994
01-JR-SG-007-005	53.654	0.199	2.778	1.049	16.274	21.224	0.092	3.797	1.144	0.000	100.211
01-JR-SG-009-005	53.708	0.336	0.813	1.040	18.307	19.826	0.144	5.285	0.485	0.000	99.944
01-JR-SG-009-006	52.812	0.430	1.388	1.478	16.915	20.315	0.142	5.210	0.569	0.000	99.259
01-JR-SG-009-007	53.365	0.382	1.306	0.854	17.037	20.765	0.147	5.422	0.477	0.002	99.757
01-JR-SG-010-007	53.785	0.323	0.822	1.046	18.155	19.355	0.151	5.624	0.490	0.000	99.751
01-JR-SG-010-008	54.011	0.271	0.680	0.931	18.836	18.812	0.159	5.441	0.435	0.000	99.576

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-SG-010-010	53.558	0.375	1.041	1.184	17.639	20.305	0.147	5.272	0.479	0.000	100.000
01-JR-SG-010-012	53.852	0.279	0.824	1.019	18.190	19.329	0.149	5.456	0.487	0.000	99.585
01-JR-SG-010-013	53.693	0.365	0.968	1.233	17.595	20.036	0.137	5.186	0.485	0.000	99.698
01-JR-SG-010-015	53.255	0.352	0.882	1.062	17.636	20.000	0.146	5.421	0.492	0.000	99.246
01-JR-SG-010-017	53.922	0.271	0.754	0.984	18.302	19.164	0.170	5.528	0.478	0.006	99.579
01-JR-SG-011-002	54.196	0.044	1.137	1.402	15.462	24.124	1.053	2.570	0.598	0.002	100.588
01-JR-SG-011-004	52.606	0.301	1.260	1.300	17.106	20.365	0.148	5.114	0.595	0.000	98.795
01-JR-SG-011-005	53.844	0.286	0.779	0.937	18.638	18.658	0.165	5.529	0.425	0.000	99.261
01-JR-SG-011-006	52.442	0.375	1.414	1.288	17.329	19.422	0.151	5.659	0.607	0.001	98.688
01-JR-SG-011-007	53.556	0.354	0.941	1.075	17.883	19.661	0.139	5.347	0.509	0.000	99.465
01-JR-SG-011-009	54.137	0.093	1.444	0.602	17.182	20.561	0.125	4.059	0.604	0.052	98.859
01-JR-SG-011-012	53.514	0.298	0.909	0.984	17.436	20.543	0.152	5.104	0.505	0.008	99.453
01-JR-SG-012-006	53.506	0.293	0.931	1.062	18.542	18.892	0.171	5.653	0.478	0.000	99.528
01-JR-SG-012-009	53.413	0.341	0.986	1.049	17.232	20.913	0.114	5.059	0.496	0.000	99.603
01-JR-TM-001-004	53.770	0.157	1.222	0.814	17.646	22.341	0.104	3.535	0.431	0.000	100.020
01-JR-TM-001-015	55.254	0.034	0.254	0.000	18.509	26.346	0.021	0.366	0.000	0.000	100.784
01-JR-TM-002-004	53.629	0.242	1.282	1.209	18.900	18.336	0.160	5.521	0.433	0.000	99.712
01-JR-TM-003-001	53.780	0.241	0.861	0.999	18.044	20.243	0.133	5.027	0.488	0.006	99.822
01-JR-TM-004-002	53.104	0.349	0.935	1.104	18.381	19.153	0.158	5.398	0.486	0.000	99.068
01-JR-TM-004-003	53.511	0.327	0.958	1.174	18.727	18.287	0.160	5.721	0.511	0.002	99.378
01-JR-TM-005-022	52.584	0.372	1.302	1.248	17.112	20.418	0.142	5.068	0.546	0.001	98.793
01-JR-TM-005-023	53.457	0.183	1.328	0.596	17.606	22.726	0.098	3.340	0.335	0.000	99.669
01-JR-TM-005-024	53.882	0.305	0.903	1.197	18.794	19.023	0.135	5.238	0.456	0.002	99.935
01-JR-TM-005-026	52.984	0.321	1.030	1.260	18.247	19.191	0.167	5.437	0.524	0.003	99.164
01-JR-TM-006-002	53.955	0.403	0.956	1.020	17.847	19.643	0.137	5.522	0.489	0.000	99.972
01-JR-TM-006-003	54.119	0.308	0.723	0.967	18.154	19.525	0.160	5.381	0.456	0.002	99.795
01-JR-TM-006-005	53.750	0.408	0.808	0.889	17.474	20.334	0.148	5.623	0.430	0.000	99.864
01-JR-TM-007-003	53.657	0.328	1.420	1.210	18.219	19.362	0.151	5.416	0.443	0.000	100.206
01-JR-TM-007-004	53.571	0.304	1.356	1.158	18.505	18.953	0.146	5.288	0.444	0.000	99.725
01-JR-TM-007-005	54.436	0.359	0.730	0.872	18.987	18.612	0.166	5.775	0.414	0.002	100.353
01-JR-TM-007-006	53.581	0.366	0.964	1.123	18.134	19.296	0.151	5.519	0.482	0.000	99.616
01-JR-TM-008-002	53.907	0.277	0.858	1.009	18.198	19.920	0.149	5.456	0.473	0.000	100.247

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
LOW Cr DIOPSIDE (NON KIMBERLITIC)											
(Cr2O3<0.5)											
01-JR-MA-002-002	54.444	0.016	1.607	0.205	14.631	23.044	0.164	4.644	1.249	0.000	100.004
01-JR-MA-002-026	54.218	0.057	1.178	0.264	15.050	23.141	0.160	4.521	1.015	0.000	99.604
01-JR-MA-002-036	53.880	0.055	1.781	0.308	14.688	22.990	0.254	4.652	0.939	0.000	99.547
01-JR-MA-003-005	43.030	0.223	17.153	0.046	14.989	11.367	0.122	8.012	2.337	0.817	98.096
01-JR-MA-003-006	43.765	0.202	16.429	0.070	16.430	11.594	0.064	6.319	2.320	0.781	97.974
01-JR-MA-003-007	43.313	0.183	16.819	0.008	16.621	11.836	0.067	5.777	2.352	0.749	97.725
01-JR-MA-007-004	53.604	0.055	2.600	0.324	14.506	23.011	0.178	4.646	1.201	0.000	100.125
01-JR-MA-01[illegible]1	53.265	0.073	2.177	0.195	13.772	22.488	0.319	6.697	1.151	0.000	100.137
01-JR-MA-014-006	54.500	0.078	2.052	0.107	14.768	22.790	0.189	4.660	1.310	0.000	100.454
01-JR-MA-014-015	53.984	0.020	1.860	0.274	14.617	23.254	0.250	5.182	0.997	0.000	100.438
01-JR-MA-014-030	56.809	0.037	1.677	0.456	21.665	11.958	0.141	4.149	0.476	0.064	97.432
01-JR-MA-025-001	51.989	0.419	1.045	0.000	17.948	4.306	0.520	24.174	0.022	0.000	100.423
01-JR-MA-025-002	50.731	0.784	2.119	0.005	13.160	16.720	0.345	15.541	0.261	0.000	99.666
01-JR-MA-025-003	50.895	0.595	1.667	0.010	13.468	13.885	0.414	18.950	0.186	0.000	100.070
01-JR-MA-025-004	51.760	0.663	2.309	0.020	15.673	16.474	0.302	12.770	0.224	0.000	100.195
01-JR-MA-025-005	52.052	0.438	1.190	0.000	17.124	5.748	0.486	23.214	0.092	0.000	100.344
01-JR-MA-027-006	54.646	0.064	1.299	0.380	15.225	23.338	0.163	4.331	1.200	0.000	100.646
01-JR-MA-033-005	54.281	0.015	0.979	0.306	15.508	23.704	0.152	4.005	0.892	0.001	99.843
01-JR-MA-062-003	38.148	1.086	12.783	0.008	5.487	34.454	0.193	4.896	0.000	0.000	97.055
01-JR-MA-062-004	54.206	0.000	0.871	0.000	17.830	25.958	0.114	0.710	0.000	0.003	99.692
01-JR-MA-064-001	55.254	0.016	0.392	0.003	18.274	26.336	0.022	0.535	0.001	0.000	100.833
01-JR-MA-064-005	54.011	0.060	1.508	0.340	14.706	22.292	0.209	5.069	1.287	0.000	99.482
01-JR-MA-064-012	54.053	0.034	1.103	0.385	15.004	22.901	0.188	4.462	1.115	0.002	99.247
01-JR-MA-068-002	53.112	0.013	1.622	0.372	14.410	23.220	0.228	5.507	0.836	0.003	99.323
01-JR-MA-070-001	53.645	0.046	1.848	0.264	15.032	23.162	0.166	4.174	0.973	0.000	99.310
01-JR-MA-083-006	53.725	0.062	1.018	0.203	15.314	23.114	0.202	4.489	0.907	0.000	99.034
01-JR-MA-104-005	54.036	0.027	1.929	0.489	15.124	22.971	0.172	3.816	0.993	0.000	99.557
01-JR-MA-104-010	54.278	0.017	1.106	0.000	18.116	26.037	0.043	0.759	0.008	0.000	100.364
01-JR-MA-113-004	53.142	0.045	1.479	0.085	15.221	23.156	0.158	4.340	0.857	0.000	98.483
01-JR-MA-120-006	55.034	0.060	0.326	0.414	16.011	24.127	0.175	3.641	0.751	0.000	100.539
01-JR-MA-131-007	54.213	0.031	1.039	0.239	15.013	23.049	0.186	4.830	0.921	0.002	99.523
01-JR-MA-147-008	53.598	0.024	0.885	0.459	15.901	23.365	0.188	4.714	0.409	0.000	99.543
01-JR-MA-173-013	54.347	0.006	0.527	0.332	15.197	23.563	0.232	4.908	1.027	0.000	100.139
01-JR-MA-174-009	53.831	0.159	0.595	0.465	16.980	22.770	0.083	3.458	0.874	0.004	99.219
01-JR-MA-174-014	53.420	0.195	1.521	0.484	18.133	22.097	0.072	2.941	0.396	0.000	99.259
01-JR-MA-175-008	53.562	0.031	0.601	0.177	15.802	24.146	0.155	3.936	0.572	0.000	98.982
01-JR-MA-180-053	52.951	0.070	0.663	0.028	14.382	23.934	0.272	6.120	0.507	0.005	98.932
01-JR-MA-181-027	52.621	0.225	1.398	0.496	17.433	23.216	0.079	2.954	0.404	0.003	98.829

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	Na2O	K2O	Total
01-JR-MA-210-014	53.031	0.140	1.393	0.366	17.413	21.927	0.124	4.350	0.378	0.000	99.122
01-JR-MA-211-003	53.023	0.124	0.714	0.328	17.100	24.217	0.090	2.710	0.200	0.003	98.509
01-JR-MA-226-005	53.498	0.052	1.828	0.354	15.105	24.157	0.118	3.831	0.720	0.000	99.663
01-JR-MA-241-001	54.414	0.027	1.237	0.316	15.106	22.996	0.232	4.779	1.081	0.000	100.188
01-JR-SG-001-147	54.078	0.182	0.860	0.375	16.802	22.305	0.075	3.709	1.036	0.014	99.436
01-JR-SG-011-008	54.080	0.024	0.145	0.165	15.549	24.705	0.224	4.275	0.274	0.000	99.441
01-JR-SG-012-007	54.129	0.064	0.442	0.121	16.579	24.936	0.142	3.405	0.198	0.000	100.016
01-JR-TM-007-002	54.113	0.038	0.786	0.138	15.451	23.583	0.208	4.752	0.852	0.000	99.921
HIGH Cr DIOPSIDE (NON KIMBERLITIC)											
Cr2O3>1.5											
01-JR-MA-005-015	52.675	0.232	6.806	1.594	19.617	11.474	0.067	3.927	1.229	0.056	97.677
01-JR-MA-012-003	38.974	0.236	19.215	3.502	0.091	34.088	0.873	4.020	0.000	0.000	100.999
01-JR-MA-014-004	37.653	0.351	13.391	10.429	0.510	25.934	5.320	6.407	0.012	0.000	100.007
01-JR-MA-014-005	37.907	0.268	14.581	9.410	0.174	30.724	3.326	3.350	0.006	0.000	99.746
01-JR-MA-015-011	39.229	0.972	19.070	2.715	0.080	35.615	0.369	3.126	0.000	0.000	101.176
01-JR-MA-041-005	38.066	0.381	16.610	5.825	0.160	31.928	1.595	5.268	0.000	0.000	99.833
01-JR-MA-060-003	37.820	0.305	16.502	5.427	0.108	32.813	0.970	5.338	0.000	0.000	99.283
01-JR-MA-064-017	38.936	0.277	19.041	2.907	0.098	34.115	0.682	4.568	0.000	0.000	100.624
01-JR-MA-074-015	39.270	0.272	19.342	2.922	0.076	34.286	0.673	4.086	0.000	0.002	100.929
01-JR-MA-075-013	38.332	0.224	18.328	4.280	0.103	32.265	1.325	4.916	0.000	0.000	99.773
01-JR-MA-113-002	37.764	0.042	18.729	3.641	0.060	34.269	1.015	3.899	0.006	0.000	99.425
01-JR-MA-128-003	38.754	0.394	20.465	1.861	0.090	34.500	0.509	3.684	0.000	0.000	100.257
01-JR-MA-135-051	35.078	0.420	1.231	4.858	0.524	32.971	0.042	21.514	0.000	0.000	96.638
01-JR-MA-180-056	35.236	0.239	0.987	2.903	0.134	33.303	0.031	24.140	0.000	0.000	96.973
01-JR-MA-225-001	52.991	0.269	1.503	1.580	17.828	19.372	0.146	5.152	0.682	0.000	99.523
01-JR-SG-010-006	37.701	1.903	11.232	13.561	0.315	33.545	2.039	0.191	0.020	0.000	100.507

Sample	SiO2	TiO2	Nb2O5	Al2O3	Cr2O3	V2O5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe2O3	FeO	Total
KIMBERLITIC ILMENITES															
01-JR-MA-014-045	0.028	43.051	0.054	0.460	0.175	0.176	5.418	0.332	47.975	0.059	0.027	97.755	21.075	29.012	99.867
01-JR-MA-014-059	0.033	44.627	0.053	0.845	0.170	0.218	5.463	0.345	45.924	0.030	0.037	97.745	17.224	30.426	99.471
01-JR-MA-015-034	0.024	47.510	0.000	0.886	0.056	0.239	7.832	0.256	41.275	0.035	0.018	98.131	13.793	28.864	99.513
01-JR-MA-015-035	0.032	49.774	0.045	0.686	1.094	0.197	9.295	0.399	36.712	0.074	0.016	98.324	9.566	28.104	99.282
01-JR-MA-015-036	0.036	50.211	0.002	0.743	1.085	0.220	9.331	0.392	36.340	0.077	0.036	98.473	8.808	28.414	99.356
01-JR-MA-015-037	0.007	50.184	0.008	0.890	1.146	0.235	9.458	0.256	36.454	0.130	0.018	98.786	9.104	28.262	99.698
01-JR-MA-015-038	0.000	47.401	0.000	0.923	0.047	0.258	7.504	0.252	41.653	0.039	0.021	98.098	13.673	29.350	99.468
01-JR-MA-015-039	0.028	44.601	0.007	0.801	0.162	0.249	6.141	0.232	45.523	0.036	0.034	97.814	18.030	29.299	99.621
01-JR-MA-028-007	0.038	45.416	0.035	0.735	0.445	0.268	6.292	0.279	44.808	0.068	0.037	98.421	16.730	29.754	100.097
01-JR-MA-029-012	0.061	46.131	0.033	0.826	0.334	0.263	6.894	0.209	43.440	0.077	0.024	98.292	15.586	29.415	99.854
01-JR-MA-029-025	0.025	53.168	0.082	0.566	1.225	0.374	11.950	0.240	31.953	0.132	0.017	99.732	5.681	26.841	100.301
01-JR-MA-053-001	0.068	46.169	0.000	0.828	0.253	0.063	5.425	0.586	44.677	0.027	0.073	98.169	14.814	31.347	99.653
01-JR-MA-055-005	0.018	45.751	0.016	0.792	0.231	0.240	6.872	0.237	43.661	0.066	0.026	97.910	16.308	28.987	99.544
01-JR-MA-058-013	0.042	46.393	0.011	0.841	0.158	0.202	7.033	0.223	43.530	0.061	0.027	98.521	15.860	29.259	100.110
01-JR-MA-059-010	0.023	42.400	0.030	0.988	0.106	0.234	4.920	0.302	48.829	0.035	0.024	97.891	21.559	29.430	100.051
01-JR-MA-061-001	0.045	48.497	0.000	0.738	0.511	0.251	7.558	0.264	40.997	0.094	0.022	98.977	11.982	30.216	100.177
01-JR-MA-069-003	0.027	42.869	0.040	0.960	0.148	0.264	5.725	0.196	47.504	0.032	0.021	97.786	21.017	28.593	99.892
01-JR-MA-071-002	0.034	46.255	0.036	0.786	0.310	0.205	6.834	0.269	43.035	0.060	0.028	97.852	15.081	29.465	99.363
01-JR-MA-073-007	0.052	46.879	0.265	0.170	1.572	0.524	7.450	0.312	40.749	0.038	0.018	98.029	12.292	29.688	99.261
01-JR-MA-073-008	0.021	44.384	0.000	0.959	0.267	0.210	6.174	0.173	45.238	0.085	0.005	97.516	18.040	29.006	99.323
01-JR-MA-073-050	0.048	43.256	0.016	0.873	0.047	0.207	5.429	0.197	47.856	0.039	0.022	97.990	20.546	29.369	100.049
01-JR-MA-073-051	0.027	45.107	0.037	0.823	0.168	0.223	6.607	0.196	44.834	0.041	0.026	98.089	17.650	28.953	99.857
01-JR-MA-073-052	0.050	43.540	0.020	0.750	0.108	0.273	5.878	0.313	47.061	0.059	0.035	98.087	20.309	28.787	100.122
01-JR-MA-073-075	0.036	44.841	0.008	0.980	0.275	0.274	6.947	0.135	44.375	0.089	0.009	97.969	17.978	28.198	99.770
01-JR-MA-073-084	0.030	41.682	0.037	0.768	0.037	0.249	4.987	0.245	48.438	0.046	0.001	96.520	21.856	28.772	98.710
01-JR-MA-073-085	0.021	53.085	0.056	0.013	0.009	0.001	8.242	1.264	36.282	0.013	0.034	99.020	4.966	31.814	99.518
01-JR-MA-073-086	0.030	45.155	0.000	0.945	0.195	0.248	6.692	0.205	43.934	0.028	0.011	97.443	16.748	28.864	99.121
01-JR-MA-074-034	0.000	43.048	0.000	1.107	0.122	0.269	5.750	0.222	47.290	0.034	0.022	97.864	20.757	28.612	99.944
01-JR-MA-074-035	0.036	42.243	0.017	0.990	0.069	0.214	5.231	0.238	48.749	0.022	0.019	97.828	22.186	28.786	100.051
01-JR-MA-074-037	0.042	51.682	0.065	0.421	0.476	0.197	9.971	0.287	35.945	0.047	0.032	99.165	7.969	28.774	99.963
01-JR-MA-074-038	0.025	51.303	0.123	0.282	0.996	0.396	10.213	0.280	35.884	0.047	0.025	99.574	8.348	28.372	100.410
01-JR-MA-074-039	0.064	47.492	0.103	0.286	0.587	0.403	7.185	0.292	42.546	0.024	0.013	98.995	13.501	30.398	100.348
01-JR-MA-074-040	0.035	52.407	0.127	0.239	1.022	0.377	10.575	0.306	34.631	0.054	0.000	99.773	6.597	28.695	100.434
01-JR-MA-075-029	0.039	43.530	0.050	0.967	0.392	0.316	6.313	0.201	46.523	0.063	0.007	98.401	20.336	28.224	100.439
01-JR-MA-075-038	0.030	41.570	0.000	1.069	0.060	0.313	5.386	0.181	48.829	0.019	0.017	97.474	23.040	28.098	99.782
01-JR-MA-075-039	0.032	44.151	0.000	0.861	0.170	0.250	5.817	0.308	46.485	0.054	0.004	98.132	18.984	29.403	100.034
01-JR-MA-075-040	0.045	44.139	0.070	0.962	0.251	0.293	6.216	0.228	45.991	0.064	0.022	98.281	18.999	28.896	100.185
01-JR-MA-075-043	0.054	42.229	0.008	0.864	0.098	0.161	5.667	0.227	47.153	0.079	0.024	96.564	21.423	27.876	98.710
01-JR-MA-075-044	0.028	48.603	0.192	0.204	1.100	0.473	8.906	0.303	38.159	0.051	0.004	98.023	10.774	28.465	99.102
01-JR-MA-076-005	0.033	43.255	0.000	0.879	0.142	0.284	5.968	0.218	46.669	0.034	0.032	97.514	20.227	28.469	99.541
01-JR-MA-097-050	0.037	51.152	0.148	0.247	0.841	0.407	9.692	0.337	36.226	0.041	0.038	99.166	7.852	29.160	99.953
01-JR-MA-097-051	0.051	53.922	0.000	0.589	1.335	0.339	12.767	0.223	30.238	0.125	0.027	99.616	4.748	25.965	100.092
01-JR-MA-097-052	0.054	46.919	0.024	0.380	0.308	0.280	4.248	0.199	46.536	0.066	0.020	99.034	12.963	34.872	100.333
01-JR-MA-097-054	0.036	53.491	0.062	0.547	0.920	0.356	12.128	0.256	31.807	0.107	0.012	99.722	5.576	26.789	100.281
01-JR-MA-097-057	0.028	53.117	0.000	0.559	0.951	0.362	11.816	0.294	32.501	0.103	0.022	99.753	6.226	26.899	100.377
01-JR-MA-097-058	0.023	54.787	0.219	0.295	0.406	0.308	12.655	0.264	30.602	0.020	0.007	99.586	3.810	27.174	99.968
01-JR-MA-097-061	0.049	53.624	0.116	0.522	0.947	0.354	12.159	0.265	30.581	0.107	0.001	98.725	4.063	26.925	99.132
01-JR-MA-097-062	0.027	53.071	0.153	0.431	0.850	0.383	12.127	0.297	31.288	0.069	0.000	98.696	5.266	26.549	99.224

Sample	SiO_2	TiO_2	Nb_2O_5	Al_2O_3	Cr_2O_3	V_2O_5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe_2O_3	FeO	Total
01-JR-MA-098-007	0.038	51.529	0.116	0.218	0.750	0.520	9.906	0.315	36.339	0.046	0.008	99.785	7.815	29.307	100.568
01-JR-MA-098-020	0.018	51.291	0.102	0.473	2.351	0.494	11.020	0.278	33.204	0.113	0.004	99.348	6.890	27.004	100.038
01-JR-MA-100-023	0.026	49.919	0.203	0.220	0.783	0.436	9.172	0.313	38.300	0.048	0.016	99.436	10.216	29.107	100.460
01-JR-MA-102-013	0.027	43.964	0.208	0.148	0.985	0.529	5.862	0.253	45.877	0.024	0.000	97.877	17.754	29.902	99.656
01-JR-MA-111-027	0.241	45.335	0.058	1.010	0.132	0.235	5.693	0.349	44.973	0.017	0.035	98.078	15.591	30.944	99.640
01-JR-MA-111-030	0.032	45.230	0.041	0.906	0.215	0.229	6.740	0.187	44.448	0.072	0.017	98.117	17.354	28.833	99.856
01-JR-MA-117-005	0.029	47.247	0.000	0.737	0.325	0.211	7.742	0.201	40.841	0.077	0.022	97.432	13.424	28.762	98.777
01-JR-MA-123-064	0.013	48.197	0.218	0.132	1.530	0.367	7.971	0.320	40.036	0.029	0.014	98.827	11.594	29.604	99.989
01-JR-MA-123-065	0.030	51.593	0.128	0.225	0.836	0.442	10.170	0.325	35.515	0.039	0.015	99.318	7.502	28.765	100.070
01-JR-MA-123-067	0.017	50.955	0.186	0.227	0.779	0.517	9.783	0.276	36.706	0.046	0.000	99.492	8.450	29.102	100.339
01-JR-MA-123-068	0.032	48.913	0.046	0.439	0.173	0.381	7.964	0.243	40.484	0.028	0.016	98.719	11.434	30.196	99.865
01-JR-MA-123-070	0.058	52.955	0.114	0.450	0.809	0.411	11.685	0.290	32.572	0.068	0.018	99.430	5.899	27.264	100.021
01-JR-MA-123-072	0.045	53.197	0.007	0.532	0.714	0.464	11.704	0.275	32.687	0.062	0.017	99.704	5.851	27.422	100.290
01-JR-MA-123-088	0.044	53.169	0.038	0.666	1.528	0.325	12.696	0.271	30.137	0.137	0.021	99.032	5.297	25.370	99.563
01-JR-MA-123-089	0.045	51.073	0.082	0.245	0.812	0.557	10.191	0.291	35.900	0.040	0.020	99.256	8.292	28.439	100.087
01-JR-MA-123-090	0.056	46.955	0.000	0.861	0.112	0.285	7.543	0.230	42.202	0.129	0.026	98.399	14.761	28.920	99.878
01-JR-MA-123-091	0.047	46.706	0.022	0.901	0.161	0.208	7.417	0.266	42.439	0.094	0.029	98.290	15.150	28.806	99.808
01-JR-MA-123-092	0.016	46.767	0.194	0.574	8.958	0.446	10.705	0.211	31.173	0.204	0.000	99.248	8.524	23.503	100.102
01-JR-MA-123-094	0.023	50.[illegible]93	0.166	0.308	4.693	0.378	11.512	0.286	31.426	0.184	0.001	99.270	7.088	25.048	99.980
01-JR-MA-126-023	0.051	47.374	0.000	0.821	0.338	0.249	7.558	0.223	41.972	0.096	0.045	98.727	14.162	29.229	100.146
01-JR-MA-126-036	0.039	53.791	0.106	0.406	0.875	0.419	12.207	0.247	31.667	0.073	0.021	99.851	5.072	27.103	100.359
01-JR-MA-129-026	0.026	44.741	0.003	0.920	0.442	0.244	6.257	0.180	45.773	0.065	0.020	98.671	18.373	29.241	100.512
01-JR-MA-130-009	0.032	48.987	0.078	0.373	0.610	0.362	8.195	0.287	40.119	0.052	0.003	99.098	11.469	29.799	100.247
01-JR-MA-130-010	0.015	42.720	0.193	0.152	1.957	0.496	6.002	0.243	45.893	0.047	0.003	97.721	19.400	28.437	99.665
01-JR-MA-132-031	0.022	51.277	0.106	0.206	0.806	0.382	9.777	0.338	36.220	0.053	0.020	99.207	8.000	29.022	100.009
01-JR-MA-132-032	0.037	48.026	0.261	0.138	0.854	0.392	8.586	0.285	39.910	0.063	0.014	98.566	12.712	28.471	99.840
01-JR-MA-132-033	0.103	45.612	0.034	1.034	0.040	0.231	6.394	0.215	44.961	0.030	0.033	98.687	16.770	29.872	100.367
01-JR-MA-132-034	0.016	42.440	0.362	0.140	3.481	0.804	6.508	0.256	44.016	0.052	0.000	98.075	17.868	27.938	99.865
01-JR-MA-132-035	0.040	45.976	0.047	0.809	0.187	0.293	6.792	0.268	44.096	0.053	0.023	98.584	16.266	29.459	100.214
01-JR-MA-132-036	0.036	47.794	0.000	0.860	0.817	0.227	7.698	0.239	40.787	0.147	0.000	98.605	12.789	29.279	99.886
01-JR-MA-132-039	0.000	49.267	0.161	0.149	1.571	0.478	8.608	0.362	37.957	0.065	0.012	98.630	9.450	29.453	99.577
01-JR-MA-132-040	0.032	45.093	0.022	0.840	0.128	0.482	7.163	0.379	43.845	0.035	0.028	98.047	17.424	28.167	99.793
01-JR-MA-132-041	0.023	43.852	0.034	0.759	0.031	0.187	4.912	0.211	47.308	0.034	0.041	97.392	18.393	30.758	99.235
01-JR-MA-132-042	0.032	42.847	0.048	0.942	0.053	0.267	4.805	0.189	47.946	0.020	0.005	97.154	19.650	30.265	99.123
01-JR-MA-134-055	0.035	51.824	0.074	0.585	2.373	0.361	10.959	0.270	33.038	0.077	0.002	99.598	6.247	27.417	100.224
01-JR-MA-134-056	0.045	50.840	0.149	0.253	2.758	0.439	10.544	0.303	33.707	0.103	0.019	99.160	6.993	27.414	99.861
01-JR-MA-134-057	0.070	44.222	0.226	0.161	0.944	0.666	5.899	0.282	46.166	0.015	0.009	98.660	17.603	30.327	100.424
01-JR-MA-134-061	0.018	52.935	0.109	0.446	0.529	0.422	11.330	0.184	32.524	0.060	0.019	98.576	5.075	27.957	99.085
01-JR-MA-134-062	0.045	44.410	0.190	0.157	1.008	0.594	5.958	0.224	44.761	0.012	0.018	97.377	16.113	30.262	98.991
01-JR-MA-135-100	0.040	51.115	0.069	0.280	3.143	0.431	10.938	0.320	33.394	0.125	0.016	99.871	7.308	26.819	100.603
01-JR-MA-135-101	0.029	52.240	0.136	0.471	0.994	0.260	10.576	0.295	34.453	0.091	0.023	99.568	6.820	28.316	100.251
01-JR-MA-135-102	0.065	53.758	0.047	0.626	1.773	0.314	12.692	0.262	30.256	0.149	0.017	99.959	4.812	25.926	100.441
01-JR-MA-135-103	0.026	51.809	0.075	0.470	0.997	0.436	11.098	0.302	33.870	0.067	0.029	99.179	7.393	27.218	99.920
01-JR-MA-135-104	0.030	53.119	0.078	0.512	1.278	0.348	11.872	0.270	32.082	0.102	0.036	99.727	5.783	26.878	100.306
01-JR-MA-135-105	0.044	51.853	0.140	0.373	4.135	0.371	12.189	0.294	30.367	0.161	0.020	99.947	5.711	25.228	100.519
01-JR-MA-135-118	0.024	44.782	0.204	0.136	2.151	0.404	6.319	0.260	43.354	0.053	0.016	97.703	15.320	29.569	99.238
01-JR-MA-136-011	0.038	53.189	0.061	0.557	1.470	0.382	12.248	0.238	30.776	0.135	0.029	99.123	4.949	26.323	99.619
01-JR-MA-136-012	0.044	53.614	0.041	0.507	0.936	0.296	11.870	0.264	31.524	0.117	0.010	99.223	4.766	27.236	99.700
01-JR-MA-138-009	0.032	54.079	0.182	0.314	0.549	0.292	12.415	0.271	31.544	0.068	0.009	99.755	5.210	26.856	100.277

Sample	SiO2	TiO2	Nb2O5	Al2O3	Cr2O3	V2O5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe2O3	FeO	Total
01-JR-MA-138-010	0.042	55.572	0.069	0.468	1.364	0.204	14.150	0.261	27.355	0.131	0.011	99.627	2.834	24.805	99.911
01-JR-MA-138-011	0.014	54.320	0.299	0.196	0.299	0.386	11.873	0.252	31.658	0.023	0.003	99.323	3.666	28.359	99.690
01-JR-MA-138-013	0.017	52.335	0.319	0.178	0.315	0.376	10.118	0.292	35.004	0.018	0.000	98.972	5.919	29.678	99.565
01-JR-MA-138-014	0.018	54.918	0.079	0.551	0.218	0.245	13.169	0.411	30.081	0.077	0.002	99.769	4.625	25.920	100.232
01-JR-MA-139-022	0.022	51.647	0.326	0.204	0.425	0.413	10.253	0.287	36.165	0.010	0.015	99.767	8.085	28.890	100.577
01-JR-MA-139-023	0.057	54.193	0.073	0.636	3.033	0.268	13.751	0.237	27.558	0.162	0.000	99.968	3.506	24.403	100.319
01-JR-MA-139-024	0.014	47.898	0.561	0.058	3.536	0.438	9.090	0.394	37.287	0.138	0.010	99.424	10.712	27.649	100.497
01-JR-MA-139-025	0.031	53.998	0.064	0.423	0.779	0.211	12.423	0.260	31.239	0.097	0.015	99.540	5.278	26.490	100.069
01-JR-MA-139-027	0.015	53.661	0.175	0.270	0.783	0.283	11.820	0.308	32.453	0.059	0.014	99.841	5.544	27.465	100.396
01-JR-MA-139-028	0.030	54.942	0.182	0.479	0.507	0.340	13.996	0.373	28.829	0.082	0.004	99.764	4.505	24.775	100.215
01-JR-MA-139-029	0.057	52.383	0.376	0.167	0.310	0.431	10.506	0.321	34.870	0.024	0.005	99.450	6.316	29.187	100.083
01-JR-MA-139-030	0.025	55.396	0.191	0.443	0.881	0.267	13.850	0.248	28.098	0.079	0.007	99.485	2.933	25.459	99.779
01-JR-MA-139-031	0.039	55.422	0.140	0.476	1.020	0.308	13.940	0.281	28.966	0.087	0.012	100.691	4.071	25.303	101.099
01-JR-MA-139-032	0.045	54.843	0.096	0.474	1.367	0.309	13.385	0.235	29.181	0.092	0.026	100.053	3.800	25.762	100.434
01-JR-MA-139-033	0.045	55.503	0.158	0.451	1.305	0.262	14.444	0.246	27.429	0.132	0.027	100.002	3.355	24.411	100.338
01-JR-MA-139-034	0.034	53.332	0.216	0.264	0.544	0.333	11.300	0.317	33.111	0.055	0.012	99.518	5.416	28.238	100.061
01-JR-MA-139-035	0.054	51.839	0.132	0.273	0.894	0.431	10.258	0.316	35.454	0.052	0.003	99.706	7.337	28.852	100.441
01-JR-MA-139-036	0.028	54.385	0.185	0.332	0.450	0.395	12.609	0.258	31.381	0.044	0.008	100.075	4.887	26.983	100.565
01-JR-MA-139-038	0.029	52.891	0.110	0.560	0.456	0.288	10.933	0.229	33.735	0.120	0.018	99.369	6.012	28.325	99.971
01-JR-MA-141-010	0.048	53.043	0.052	0.546	0.342	0.434	11.600	0.277	33.088	0.061	0.033	99.524	6.256	27.459	100.151
01-JR-MA-143-012	0.092	55.094	0.131	0.488	1.257	0.269	13.556	0.221	29.093	0.118	0.006	100.325	3.748	25.721	100.701
01-JR-MA-143-013	0.033	52.367	0.297	0.469	0.562	0.434	13.144	0.261	31.511	0.155	0.011	99.244	8.023	24.292	100.048
01-JR-MA-143-014	0.011	51.838	0.118	0.286	0.764	0.414	10.319	0.296	35.501	0.055	0.018	99.620	7.610	28.653	100.382
01-JR-MA-143-015	0.023	53.067	0.317	0.156	0.311	0.328	10.829	0.311	34.527	0.038	0.022	99.929	6.208	28.941	100.551
01-JR-MA-143-016	0.041	54.522	0.128	0.468	1.318	0.334	13.402	0.224	29.200	0.111	0.007	99.755	4.088	25.522	100.165
01-JR-MA-143-017	0.026	51.206	0.302	0.247	3.947	0.381	12.978	0.299	30.092	0.164	0.020	99.662	7.435	23.402	100.407
01-JR-MA-143-019	0.005	52.040	0.170	0.227	0.844	0.413	10.280	0.299	34.702	0.053	0.015	99.048	6.389	28.953	99.688
01-JR-MA-144-026	0.039	54.166	0.137	0.304	0.540	0.385	12.150	0.291	31.931	0.064	0.033	100.040	4.952	27.475	100.536
01-JR-MA-144-027	0.022	53.434	0.303	0.765	0.937	0.495	13.910	0.275	29.858	0.071	0.000	100.070	6.452	24.052	100.716
01-JR-MA-144-028	0.066	54.144	0.139	0.376	0.742	0.284	12.001	0.262	31.571	0.069	0.000	99.654	4.358	27.649	100.091
01-JR-MA-144-029	0.034	48.124	0.546	0.164	1.663	0.518	8.487	0.303	39.422	0.044	0.030	99.335	11.332	29.225	100.470
01-JR-MA-144-030	0.024	51.640	0.181	0.213	0.422	0.332	9.777	0.313	36.218	0.042	0.002	99.164	7.572	29.404	99.923
01-JR-MA-144-031	0.030	49.528	0.124	0.220	1.466	0.269	8.619	0.272	38.107	0.051	0.000	98.686	9.622	29.449	99.650
01-JR-MA-144-032	0.039	52.687	0.355	0.163	0.380	0.376	10.659	0.280	33.870	0.017	0.026	98.852	5.317	29.086	99.385
01-JR-MA-144-033	0.032	54.621	0.155	0.297	0.433	0.256	12.007	0.295	31.709	0.064	0.008	99.877	4.162	27.964	100.294
01-JR-MA-144-034	0.029	54.944	0.113	0.472	1.466	0.318	13.379	0.253	28.302	0.123	0.007	99.406	2.730	25.846	99.680
01-JR-MA-146-008	0.073	54.099	0.141	0.491	2.065	0.355	13.498	0.249	28.835	0.115	0.015	99.936	4.240	25.020	100.361
01-JR-MA-146-009	0.021	54.604	0.110	0.578	0.814	0.264	13.968	0.336	28.954	0.088	0.000	99.737	5.119	24.348	100.250
01-JR-MA-146-010	0.058	54.170	0.131	0.287	0.422	0.313	12.022	0.278	32.378	0.048	0.033	100.140	5.268	27.638	100.668
01-JR-MA-148-007	0.032	46.222	0.228	0.158	1.890	0.655	7.639	0.271	41.045	0.065	0.006	98.211	13.464	28.930	99.560
01-JR-MA-149-008	0.034	51.559	0.041	0.316	1.077	0.394	10.118	0.270	35.197	0.065	0.018	99.089	7.232	28.690	99.814
01-JR-MA-149-009	0.050	51.391	0.124	0.204	2.787	0.394	10.636	0.308	33.114	0.110	0.000	99.118	6.063	27.659	99.725
01-JR-MA-149-010	0.034	51.532	0.110	0.251	0.957	0.441	10.063	0.284	35.366	0.057	0.026	99.121	7.187	28.899	99.841
01-JR-MA-151-015	0.025	53.345	0.008	0.544	1.183	0.321	11.957	0.241	31.765	0.118	0.024	99.531	5.484	26.830	100.080
01-JR-MA-151-016	0.026	50.827	0.077	0.268	3.591	0.376	11.225	0.266	32.354	0.149	0.031	99.190	7.093	25.972	99.901
01-JR-MA-151-017	0.045	52.532	0.132	0.252	0.855	0.480	10.863	0.268	33.536	0.088	0.011	99.062	5.629	28.471	99.626
01-JR-MA-151-018	0.038	47.170	0.220	0.147	1.407	0.557	7.661	0.313	41.063	0.042	0.011	98.629	12.782	29.562	99.910
01-JR-MA-151-019	0.047	51.995	0.068	0.394	1.050	0.340	10.859	0.378	34.389	0.083	0.000	99.603	7.534	27.610	100.358
01-JR-MA-151-020	0.025	51.523	0.180	0.262	0.908	0.470	9.873	0.285	35.806	0.050	0.001	99.383	7.155	29.368	100.100

Sample	SiO_2	TiO_2	Nb_2O_5	Al_2O_3	Cr_2O_3	V_2O_5	MgO	MnO	FeO^*	NiO	ZnO	Total	Fe_2O_3	FeO	Total
01-JR-MA-151-022	0.038	50.047	0.107	0.424	5.501	0.451	11.633	0.241	30.978	0.182	0.026	99.628	6.970	24.706	100.326
01-JR-MA-155-003	0.025	47.655	0.191	0.176	1.271	0.683	7.793	0.324	40.653	0.063	0.030	98.864	11.987	29.867	100.065
01-JR-MA-156-017	0.041	45.869	0.358	0.135	4.753	0.574	8.338	0.287	38.358	0.124	0.000	98.837	12.264	27.322	100.066
01-JR-MA-156-018	0.042	47.845	0.199	0.162	1.922	0.386	8.499	0.283	38.940	0.055	0.012	98.345	11.709	28.405	99.518
01-JR-MA-156-019	0.055	46.673	0.160	0.132	0.955	0.469	6.789	0.278	42.917	0.014	0.017	98.459	13.752	30.542	99.837
01-JR-MA-156-020	0.071	53.704	0.035	0.580	1.245	0.354	12.696	0.254	30.529	0.129	0.023	99.620	5.089	25.950	100.130
01-JR-MA-156-021	0.021	47.360	0.215	0.159	1.623	0.433	7.952	0.289	40.705	0.064	0.000	98.821	13.002	29.005	100.124
01-JR-MA-156-022	0.035	49.575	0.078	0.465	6.689	0.402	11.998	0.264	29.593	0.204	0.014	99.317	6.788	23.485	99.997
01-JR-MA-156-023	0.039	50.290	0.267	0.163	1.547	0.461	9.601	0.325	36.200	0.045	0.009	98.947	8.227	28.798	99.771
01-JR-MA-156-024	0.031	50.048	0.089	0.538	0.133	0.345	8.608	0.247	38.920	0.033	0.028	99.020	9.871	30.036	100.009
01-JR-MA-162-032	0.019	52.845	0.053	0.421	0.984	0.452	11.621	0.296	33.023	0.062	0.000	99.776	6.419	27.247	100.419
01-JR-MA-162-033	0.014	53.878	0.125	0.268	0.605	0.323	11.892	0.250	32.647	0.066	0.000	100.068	5.605	27.604	100.630
01-JR-MA-162-034	0.045	54.224	0.101	0.481	0.393	0.290	12.310	0.294	31.300	0.080	0.027	99.545	4.726	27.047	100.019
01-JR-MA-162-035	0.041	55.745	0.220	0.446	0.869	0.251	14.472	0.240	27.753	0.066	0.034	100.137	3.408	24.687	100.478
01-JR-MA-164-002	0.029	49.774	0.115	0.527	0.161	0.327	9.114	0.295	38.896	0.052	0.013	99.303	11.183	28.834	100.423
01-JR-MA-165-089	0.035	49.399	0.055	0.482	0.295	0.307	9.155	0.242	39.034	0.039	0.006	99.049	11.811	28.406	100.232
01-JR-MA-165-111	0.045	46.269	0.062	0.271	0.401	0.461	6.472	0.212	44.199	0.000	0.006	98.398	14.998	30.703	99.901
01-JR-MA-165-112	0.037	53.926	0.119	0.517	2.667	0.247	13.173	0.276	28.487	0.188	0.019	99.656	3.759	25.105	100.033
01-JR-MA-165-113	0.023	49.844	0.022	0.502	0.135	0.346	8.648	0.254	39.363	0.037	0.031	99.205	10.751	29.689	100.282
01-JR-MA-165-114	0.052	48.725	0.026	0.543	0.630	0.382	9.513	0.282	38.501	0.070	0.016	98.740	12.570	27.191	99.999
01-JR-MA-165-115	0.026	51.010	0.065	0.652	0.214	0.321	10.239	0.358	36.869	0.083	0.001	99.838	10.090	27.790	100.849
01-JR-MA-165-117	0.058	50.209	0.019	0.553	0.165	0.308	8.998	0.253	38.723	0.045	0.006	99.337	10.375	29.388	100.376
01-JR-MA-165-118	0.040	48.254	0.085	0.346	0.324	0.420	7.522	0.265	41.003	0.031	0.035	98.325	11.714	30.462	99.499
01-JR-MA-165-119	0.032	48.861	0.018	0.363	0.597	0.469	7.967	0.296	40.441	0.031	0.028	99.103	11.397	30.185	100.245
01-JR-MA-165-120	0.023	48.192	0.036	0.349	0.429	0.364	7.444	0.291	41.406	0.036	0.023	98.593	12.272	30.363	99.823
01-JR-MA-165-121	0.047	48.759	0.111	0.317	0.674	0.375	7.883	0.271	40.389	0.037	0.005	98.868	11.264	30.253	99.997
01-JR-MA-165-122	0.038	54.995	0.306	0.581	0.549	0.279	14.310	0.441	28.607	0.102	0.005	100.213	4.873	24.222	100.701
01-JR-MA-165-123	0.016	44.118	0.116	0.265	0.289	0.501	5.541	0.241	47.037	0.022	0.018	98.164	18.429	30.454	100.010
01-JR-MA-165-124	0.022	50.808	0.055	0.352	0.590	0.348	9.062	0.263	38.308	0.057	0.012	99.877	9.406	29.844	100.819
01-JR-MA-165-126	0.027	47.680	0.096	0.314	0.356	0.348	7.375	0.240	41.798	0.018	0.008	98.260	12.942	30.152	99.557
01-JR-MA-165-127	0.047	48.939	0.149	0.261	1.809	0.446	9.471	0.336	37.190	0.096	0.007	98.751	10.642	27.614	99.817
01-JR-MA-165-128	0.035	49.975	0.000	0.561	0.140	0.433	8.568	0.278	39.310	0.044	0.000	99.344	10.264	30.074	100.372
01-JR-MA-165-129	0.040	48.906	0.253	0.177	4.245	0.346	10.095	0.352	34.750	0.130	0.017	99.311	9.323	26.361	100.245
01-JR-MA-165-130	0.034	50.099	0.121	0.249	1.372	0.298	8.895	0.312	37.792	0.068	0.002	99.242	9.260	29.460	100.170
01-JR-MA-165-131	0.065	50.117	0.073	0.524	0.124	0.340	9.029	0.286	38.523	0.048	0.000	99.129	10.210	29.336	100.152
01-JR-MA-165-132	0.029	48.639	0.233	0.174	0.760	0.346	7.526	0.302	40.963	0.034	0.012	99.018	11.282	30.811	100.148
01-JR-MA-165-133	0.043	48.477	0.050	0.333	0.576	0.504	7.894	0.326	40.692	0.030	0.006	98.931	11.812	30.063	100.114
01-JR-MA-165-134	0.026	50.440	0.220	0.480	0.565	0.673	11.588	0.310	34.920	0.127	0.000	99.349	10.353	25.605	100.386
01-JR-MA-165-135	0.056	48.270	0.151	0.379	0.327	0.414	8.005	0.260	40.979	0.025	0.003	98.869	12.495	29.736	100.121
01-JR-MA-165-136	0.043	47.619	0.066	0.308	0.355	0.391	7.918	0.235	41.509	0.023	0.011	98.478	13.699	29.182	99.851
01-JR-MA-165-137	0.069	50.344	0.051	0.334	0.634	0.319	9.086	0.251	37.700	0.045	0.012	98.845	9.208	29.414	99.768
01-JR-MA-165-138	0.048	52.334	0.088	0.455	0.189	0.310	10.698	0.278	35.224	0.051	0.020	99.695	7.704	28.292	100.467
01-JR-MA-165-139	0.043	51.179	0.055	0.286	1.558	0.377	10.835	0.292	34.997	0.083	0.019	99.724	8.855	27.029	100.611
01-JR-MA-165-140	0.026	54.767	0.070	0.435	0.887	0.266	13.170	0.287	29.881	0.091	0.007	99.887	4.399	25.923	100.328
01-JR-MA-165-141	0.041	54.595	0.204	0.431	0.558	0.297	14.430	0.406	28.526	0.093	0.009	99.590	5.463	23.611	100.137
01-JR-MA-165-142	0.037	55.307	0.117	0.301	0.553	0.270	12.871	0.298	30.064	0.051	0.008	99.877	3.363	27.038	100.214
01-JR-MA-165-145	0.032	43.439	0.311	0.097	3.470	0.495	6.312	0.293	43.589	0.125	0.006	98.169	16.715	28.549	99.844
01-JR-MA-165-146	0.017	45.279	0.278	0.216	2.367	0.593	7.886	0.281	41.462	0.094	0.004	98.477	15.468	27.544	100.027
01-JR-MA-165-147	0.041	55.617	0.131	0.435	1.377	0.233	14.297	0.285	27.348	0.113	0.005	99.882	2.950	24.693	100.178

Sample	SiO2	TiO2	Nb2O5	Al2O3	Cr2O3	V2O5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe2O3	FeO	Total
01-JR-MA-165-148	0.034	49.431	0.090	0.225	0.466	0.361	7.789	0.304	40.605	0.052	0.011	99.368	10.773	30.912	100.447
01-JR-MA-165-151	0.023	47.501	0.089	0.296	0.395	0.405	7.036	0.276	43.003	0.033	0.020	99.077	13.771	30.612	100.457
01-JR-MA-165-153	0.063	55.423	0.133	0.513	1.256	0.262	13.964	0.239	28.174	0.099	0.027	100.153	3.275	25.227	100.481
01-JR-MA-165-155	0.048	53.775	0.196	0.259	0.544	0.336	12.644	0.219	31.675	0.047	0.019	99.762	5.927	26.342	100.356
01-JR-MA-165-161	0.049	51.604	0.094	0.501	0.275	0.396	10.753	0.253	34.826	0.049	0.010	98.810	7.901	27.717	99.602
01-JR-MA-165-163	0.047	55.196	0.263	0.805	1.715	0.277	14.877	0.249	25.861	0.228	0.024	99.542	2.724	23.410	99.815
01-JR-MA-165-164	0.020	47.285	0.107	0.264	0.399	0.460	6.851	0.310	43.251	0.032	0.004	98.983	13.803	30.831	100.366
01-JR-MA-165-165	0.047	50.053	0.133	0.199	1.166	0.319	8.259	0.302	39.151	0.039	0.011	99.679	9.455	30.644	100.626
01-JR-MA-165-166	0.031	50.375	0.041	0.575	0.173	0.335	8.858	0.283	38.861	0.039	0.031	99.602	10.099	29.774	100.614
01-JR-MA-165-168	0.046	49.366	0.087	0.343	0.560	0.376	8.107	0.271	40.157	0.028	0.005	99.346	10.862	30.383	100.434
01-JR-MA-165-169	0.017	51.945	0.088	0.405	0.208	0.389	9.982	0.296	36.134	0.040	0.022	99.526	7.599	29.296	100.287
01-JR-MA-165-170	0.040	50.011	0.190	0.480	0.864	0.409	11.859	0.184	34.702	0.128	0.000	98.867	11.416	24.430	100.011
01-JR-MA-165-171	0.032	54.576	0.058	0.883	2.867	0.267	14.344	0.210	26.932	0.223	0.000	100.392	3.689	23.612	100.762
01-JR-MA-165-172	0.020	47.564	0.091	0.309	0.341	0.398	8.137	0.255	41.526	0.055	0.011	98.707	14.252	28.702	100.135
01-JR-MA-165-173	0.029	50.545	0.005	0.535	0.169	0.337	8.955	0.261	38.801	0.047	0.000	99.684	10.050	29.758	100.691
01-JR-MA-165-174	0.028	48.948	0.128	0.358	0.807	0.396	7.967	0.298	39.788	0.040	0.020	98.778	10.590	30.259	99.839
01-JR-MA-165-175	0.070	50.110	0.018	0.610	0.164	0.345	8.682	0.232	39.170	0.028	0.012	99.441	10.229	29.966	100.466
01-JR-MA-165-176	0.046	51.633	0.112	0.506	0.758	0.287	10.027	0.294	35.999	0.067	0.021	99.750	7.988	28.812	100.550
01-JR-MA-165-177	0.047	48.590	0.036	0.345	0.387	0.407	7.656	0.232	41.637	0.025	0.023	99.385	12.366	30.510	100.624
01-JR-MA-165-178	0.026	48.652	0.083	0.330	0.316	0.399	8.101	0.256	41.068	0.023	0.007	99.261	12.547	29.778	100.518
01-JR-MA-165-179	0.039	45.845	0.097	0.244	0.372	0.501	6.321	0.254	45.353	0.016	0.012	99.054	16.371	30.622	100.694
01-JR-MA-165-180	0.054	50.413	0.000	0.648	0.358	0.339	8.972	0.285	38.485	0.092	0.025	99.671	9.933	29.547	100.666
01-JR-MA-165-181	0.035	46.800	0.453	0.191	1.868	0.436	8.136	0.247	40.801	0.044	0.027	99.038	13.681	28.491	100.409
01-JR-MA-165-183	0.039	50.258	0.054	0.367	1.132	0.411	9.033	0.282	37.864	0.055	0.017	99.512	9.297	29.499	100.443
01-JR-MA-165-184	0.042	50.183	0.024	0.593	0.179	0.371	8.691	0.229	38.825	0.045	0.007	99.189	9.785	30.021	100.169
01-JR-MA-165-185	0.018	50.125	0.157	0.192	1.239	0.395	8.254	0.335	38.960	0.061	0.040	99.776	9.126	30.748	100.690
01-JR-MA-165-186	0.057	50.939	0.113	0.283	1.641	0.382	10.388	0.278	35.813	0.082	0.015	99.991	8.999	27.716	100.893
01-JR-MA-165-187	0.026	55.060	0.182	0.252	0.368	0.364	12.551	0.274	30.993	0.030	0.018	100.118	3.740	27.628	100.493
01-JR-MA-165-189	0.020	54.011	0.154	0.385	0.413	0.260	12.763	0.308	30.894	0.074	0.021	99.303	5.411	26.025	99.845
01-JR-MA-165-190	0.037	53.031	0.046	0.540	0.690	0.336	10.966	0.237	34.013	0.081	0.017	99.994	6.195	28.439	100.615
01-JR-MA-165-191	0.030	48.028	0.068	0.333	0.296	0.431	7.449	0.225	41.986	0.008	0.023	98.877	12.821	30.450	100.162
01-JR-MA-165-192	0.037	45.578	0.147	0.273	0.374	0.454	6.195	0.242	45.436	0.003	0.023	98.762	16.489	30.599	100.414
01-JR-MA-165-193	0.032	47.241	0.090	0.279	0.336	0.418	6.868	0.249	43.341	0.013	0.002	98.869	13.968	30.772	100.269
01-JR-MA-165-194	0.068	49.689	0.007	0.467	0.122	0.341	8.183	0.238	40.399	0.025	0.008	99.547	11.050	30.456	100.654
01-JR-MA-165-195	0.037	49.481	0.039	0.313	0.510	0.373	8.235	0.313	40.216	0.051	0.014	99.582	11.222	30.118	100.706
01-JR-MA-165-196	0.048	50.571	0.000	0.592	0.180	0.331	8.857	0.273	38.826	0.049	0.028	99.755	9.892	29.925	100.746
01-JR-MA-165-197	0.039	51.557	0.317	0.157	0.456	0.404	9.833	0.309	36.949	0.019	0.020	100.060	8.257	29.519	100.887
01-JR-MA-165-198	0.039	55.356	0.077	0.404	1.037	0.369	13.408	0.283	29.228	0.076	0.031	100.308	3.352	26.212	100.644
01-JR-MA-165-199	0.008	50.629	0.043	0.684	0.342	0.315	9.466	0.232	37.915	0.055	0.005	99.694	9.995	28.921	100.695
01-JR-MA-165-200	0.034	49.080	0.055	0.327	0.565	0.399	8.080	0.262	40.575	0.039	0.025	99.441	11.594	30.142	100.603
01-JR-MA-165-201	0.046	49.400	0.152	0.234	1.158	0.415	8.955	0.343	38.538	0.061	0.006	99.308	10.679	28.929	100.378
01-JR-MA-165-202	0.041	48.987	0.033	0.831	0.423	0.578	9.929	0.237	38.234	0.037	0.022	99.352	12.417	27.061	100.596
01-JR-MA-167-029	0.045	51.002	0.143	0.264	2.826	0.458	10.710	0.296	33.956	0.109	0.007	99.816	7.398	27.300	100.557
01-JR-MA-167-030	0.036	51.788	0.148	0.282	0.826	0.524	11.229	0.258	34.705	0.056	0.006	99.858	8.262	27.271	100.686
01-JR-MA-167-031	0.039	53.046	0.119	0.419	1.020	0.457	11.570	0.287	32.940	0.071	0.013	99.981	5.923	27.611	100.574
01-JR-MA-167-035	0.042	51.576	0.163	0.521	0.167	0.282	10.167	0.279	36.365	0.049	0.034	99.645	8.658	28.574	100.512
01-JR-MA-169-003	0.034	51.753	0.128	0.336	1.073	0.503	10.359	0.284	34.945	0.049	0.028	99.492	6.948	28.693	100.188
01-JR-MA-169-004	0.021	51.387	0.177	0.222	0.476	0.368	10.583	0.295	35.698	0.049	0.017	99.293	8.791	27.788	100.174
01-JR-MA-169-009	0.051	53.197	0.174	0.390	0.790	0.392	11.411	0.250	33.080	0.065	0.011	99.811	5.594	28.046	100.372

Sample	SiO_2	TiO_2	Nb_2O_5	Al_2O_3	Cr_2O_3	V_2O_5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe_2O_3	FeO	Total
01-JR-MA-169-010	0.027	51.791	0.170	0.264	1.011	0.555	10.416	0.246	35.102	0.041	0.013	99.636	6.999	28.805	100.337
01-JR-MA-169-011	0.049	52.576	0.104	0.375	0.789	0.366	11.255	0.267	33.297	0.054	0.009	99.141	6.285	27.642	99.771
01-JR-MA-169-013	0.041	53.270	0.090	0.552	0.333	0.363	11.570	0.231	33.519	0.068	0.000	100.037	6.460	27.706	100.684
01-JR-MA-169-014	0.035	51.596	0.174	0.219	0.709	0.478	9.963	0.301	36.282	0.048	0.013	99.818	7.797	29.266	100.599
01-JR-MA-169-015	0.027	50.673	0.177	0.217	1.329	0.484	9.314	0.290	37.372	0.069	0.011	99.963	8.650	29.589	100.830
01-JR-MA-169-016	0.042	53.916	0.009	0.541	0.889	0.429	12.567	0.380	31.352	0.077	0.000	100.202	5.538	26.368	100.757
01-JR-MA-169-017	0.032	51.129	0.190	0.292	0.995	0.466	9.934	0.311	36.076	0.069	0.007	99.501	8.011	28.868	100.304
01-JR-MA-170-006	0.041	51.666	0.046	0.385	2.391	0.339	10.797	0.275	33.529	0.117	0.021	99.607	6.761	27.445	100.284
01-JR-MA-170-008	0.046	52.566	0.152	0.244	1.473	0.366	11.003	0.294	33.367	0.063	0.004	99.578	5.855	28.098	100.165
01-JR-MA-170-009	0.038	52.012	0.183	0.224	1.377	0.408	9.946	0.343	35.551	0.069	0.000	100.151	6.700	29.522	100.822
01-JR-MA-170-010	0.044	51.862	0.171	0.243	0.807	0.424	9.924	0.311	35.871	0.036	0.022	99.715	7.091	29.491	100.425
01-JR-MA-171-006	0.047	52.155	0.118	0.251	0.993	0.402	10.192	0.316	35.568	0.041	0.019	100.102	7.098	29.181	100.813
01-JR-MA-171-007	0.028	52.724	0.055	0.586	1.372	0.357	11.943	0.268	32.350	0.135	0.011	99.829	6.640	26.376	100.494
01-JR-MA-171-008	0.050	53.909	0.002	0.546	1.148	0.301	12.634	0.239	31.161	0.126	0.000	100.116	5.582	26.138	100.675
01-JR-MA-171-009	0.019	51.496	0.157	0.194	1.459	0.365	10.137	0.342	35.643	0.068	0.000	99.880	7.826	28.601	100.664
01-JR-MA-172-021	0.036	53.285	0.118	0.567	0.983	0.382	12.138	0.260	31.981	0.074	0.000	99.824	5.840	26.726	100.409
01-JR-MA-172-023	0.009	50.248	0.199	0.174	1.931	0.379	9.732	0.324	36.506	0.077	0.008	99.587	9.166	28.259	100.505
01-JR-MA-172-024	0.017	47.229	0.219	0.168	0.925	0.422	7.397	0.287	41.942	0.038	0.035	98.679	13.433	29.855	100.025
01-JR-MA-172-025	0.021	51.902	0.073	0.310	1.148	0.385	10.279	0.293	35.253	0.052	0.035	99.751	7.293	28.690	100.482
01-JR-MA-172-026	0.050	53.542	0.049	0.518	0.986	0.300	12.163	0.287	32.118	0.100	0.017	100.130	6.068	26.658	100.738
01-JR-MA-172-029	0.017	50.777	0.181	0.180	0.480	0.473	9.352	0.294	37.568	0.039	0.000	99.361	8.829	29.624	100.246
01-JR-MA-172-030	0.038	47.673	0.107	0.319	0.301	0.468	7.518	0.226	41.943	0.027	0.017	98.637	13.158	30.104	99.955
01-JR-MA-172-031	0.029	53.308	0.070	0.589	0.986	0.445	12.083	0.270	31.746	0.070	0.000	99.596	5.410	26.878	100.138
01-JR-MA-172-033	0.063	52.627	0.090	0.229	1.514	0.368	11.044	0.319	32.956	0.070	0.026	99.306	5.524	27.985	99.859
01-JR-MA-172-034	0.035	51.164	0.139	0.431	0.459	0.332	9.937	0.255	36.597	0.055	0.029	99.433	8.797	28.681	100.314
01-JR-MA-172-035	0.039	50.760	0.165	0.156	1.106	0.451	9.615	0.339	36.760	0.043	0.019	99.453	8.571	29.048	100.312
01-JR-MA-172-036	0.029	44.042	0.407	0.096	4.214	0.551	7.486	0.342	40.922	0.082	0.014	98.185	15.281	27.172	99.716
01-JR-MA-173-020	0.013	49.371	0.166	0.232	0.974	0.467	8.512	0.319	39.210	0.034	0.000	99.298	10.452	29.806	100.345
01-JR-MA-173-021	0.034	50.834	0.173	0.221	2.581	0.437	10.322	0.328	34.396	0.102	0.023	99.451	7.346	27.786	100.187
01-JR-MA-173-029	0.025	50.429	0.019	0.260	3.365	0.418	10.678	0.324	33.535	0.111	0.018	99.182	7.729	26.580	99.956
01-JR-MA-173-030	0.036	45.518	0.238	0.183	2.011	0.749	7.241	0.290	42.395	0.068	0.000	98.729	14.716	29.153	100.203
01-JR-MA-173-032	0.033	53.944	0.085	0.502	0.959	0.274	12.723	0.370	30.610	0.113	0.023	99.636	5.237	25.897	100.161
01-JR-MA-173-033	0.037	53.817	0.086	0.571	1.273	0.301	12.700	0.282	30.964	0.130	0.008	100.169	5.563	25.959	100.726
01-JR-MA-173-034	0.053	52.956	0.047	0.385	0.487	0.221	11.010	0.295	34.386	0.056	0.025	99.921	6.998	28.090	100.622
01-JR-MA-173-035	0.035	52.146	0.099	0.243	1.311	0.370	10.539	0.319	34.285	0.057	0.025	99.429	6.490	28.445	100.079
01-JR-MA-173-036	0.022	51.406	0.117	0.250	3.183	0.432	10.943	0.260	33.272	0.127	0.015	100.027	6.789	27.163	100.707
01-JR-MA-174-022	0.047	52.199	0.102	0.445	0.590	0.197	10.208	0.257	34.914	0.071	0.016	99.046	6.701	28.884	99.717
01-JR-MA-174-026	0.035	51.135	0.151	0.214	2.378	0.368	10.607	0.308	34.071	0.098	0.000	99.365	7.345	27.462	100.101
01-JR-MA-174-027	0.028	53.217	0.077	0.490	0.765	0.423	11.734	0.279	32.685	0.066	0.005	99.769	5.896	27.380	100.360
01-JR-MA-174-028	0.033	51.382	0.185	0.187	1.776	0.401	10.200	0.340	35.391	0.078	0.013	99.986	7.690	28.471	100.757
01-JR-MA-174-029	0.045	52.419	0.090	0.428	0.475	0.274	10.357	0.286	35.260	0.042	0.021	99.697	7.049	28.917	100.403
01-JR-MA-174-030	0.036	52.794	0.188	0.271	1.257	0.342	11.254	0.318	33.036	0.062	0.023	99.581	5.813	27.805	100.163
01-JR-MA-174-031	0.022	49.767	0.164	0.146	1.496	0.441	8.801	0.308	37.842	0.063	0.000	99.050	9.163	29.597	99.968
01-JR-MA-174-032	0.029	52.585	0.096	0.223	1.298	0.366	10.509	0.290	34.217	0.073	0.009	99.695	5.904	28.905	100.286
01-JR-MA-175-009	0.039	45.656	0.370	0.090	4.481	0.572	8.265	0.279	39.125	0.133	0.029	99.039	13.206	27.242	100.362
01-JR-MA-179-015	0.022	53.916	0.086	0.579	1.346	0.376	12.821	0.210	30.207	0.134	0.009	99.706	4.675	26.001	100.174
01-JR-MA-179-016	0.049	54.030	0.068	0.570	1.438	0.366	12.535	0.238	30.901	0.129	0.014	100.338	4.800	26.582	100.819
01-JR-MA-180-068	0.038	49.755	0.230	0.214	0.797	0.448	8.627	0.316	39.014	0.019	0.009	99.467	9.990	30.025	100.468
01-JR-MA-180-069	0.023	51.342	0.080	0.281	0.968	0.386	10.489	0.287	35.424	0.044	0.012	99.336	8.408	27.858	100.178

Sample	SiO2	TiO2	Nb2O5	Al2O3	Cr2O3	V2O5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe2O3	FeO	Total
01-JR-MA-180-070	0.030	50.780	0.176	0.217	2.495	0.376	10.576	0.292	34.369	0.090	0.018	99.419	7.923	27.240	100.213
01-JR-MA-180-072	0.037	53.275	0.167	0.329	1.153	0.273	11.574	0.305	32.880	0.099	0.030	100.122	5.970	27.508	100.720
01-JR-MA-180-073	0.027	51.082	0.074	0.447	2.827	0.332	10.653	0.279	33.854	0.133	0.000	99.708	7.419	27.178	100.451
01-JR-MA-180-074	0.021	52.837	0.213	0.253	0.373	0.317	11.338	0.322	33.200	0.026	0.000	98.900	6.096	27.714	99.511
01-JR-MA-181-035	0.047	55.009	0.015	0.534	1.318	0.250	14.059	0.268	27.854	0.132	0.000	99.486	3.747	24.483	99.861
01-JR-MA-181-036	0.029	50.064	0.080	0.684	0.046	0.300	9.088	0.292	38.335	0.041	0.007	98.966	10.287	29.079	99.997
01-JR-MA-181-037	0.034	50.599	0.252	0.166	0.535	0.447	9.836	0.286	36.732	0.021	0.002	98.910	8.947	28.681	99.806
01-JR-MA-181-038	0.031	51.855	0.110	0.346	1.334	0.333	10.972	0.271	33.950	0.091	0.023	99.316	7.303	27.378	100.048
01-JR-MA-181-039	0.053	51.216	0.075	0.541	0.050	0.242	9.844	0.238	36.630	0.059	0.027	98.975	8.792	28.719	99.856
01-JR-MA-181-040	0.028	53.371	0.243	0.352	0.455	0.352	11.868	0.291	33.050	0.031	0.000	100.041	6.309	27.373	100.673
01-JR-MA-181-041	0.031	53.734	0.079	0.554	1.019	0.288	11.914	0.269	32.316	0.077	0.007	100.288	5.559	27.314	100.845
01-JR-MA-182-032	0.040	51.062	0.129	0.241	0.604	0.395	9.647	0.296	36.521	0.032	0.009	98.976	8.137	29.199	99.791
01-JR-MA-182-033	0.053	52.468	0.119	0.277	1.049	0.381	10.615	0.317	34.264	0.064	0.007	99.614	6.216	28.671	100.237
01-JR-MA-182-034	0.023	48.014	0.196	0.190	1.271	[illegible]	8.037	0.313	40.398	0.049	0.020	99.102	11.949	29.646	100.299
01-JR-MA-182-035	0.036	50.026	0.118	0.201	0.445	0.387	8.874	0.297	38.846	0.021	0.000	99.251	10.238	29.633	100.277
01-JR-MA-182-036	0.034	51.627	0.063	0.413	2.236	0.285	11.158	0.286	33.267	0.127	0.023	99.519	7.333	26.669	100.254
01-JR-MA-182-037	0.045	50.958	0.194	0.262	2.782	0.444	10.795	0.289	33.488	0.117	0.021	99.395	7.067	27.129	100.103
01-JR-MA-182-038	0.040	50.983	0.139	0.409	0.616	0.343	9.699	0.230	36.985	0.047	0.006	99.497	8.852	29.019	100.384
01-JR-MA-182-039	0.047	53.349	0.016	0.584	1.222	0.377	12.264	0.258	31.471	0.132	0.020	99.740	5.655	26.383	100.307
01-JR-MA-182-042	0.042	52.535	0.086	0.263	1.593	0.335	11.441	0.340	33.107	0.074	0.008	99.824	6.671	27.104	100.492
01-JR-MA-182-043	0.036	54.053	0.034	0.547	1.187	0.404	12.435	0.260	30.802	0.128	0.007	99.893	4.477	26.774	100.342
01-JR-MA-182-044	0.078	54.028	0.110	0.534	0.991	0.279	12.675	0.250	31.125	0.126	0.019	100.215	5.407	26.260	100.757
01-JR-MA-182-045	0.014	52.427	0.166	0.279	0.877	0.354	10.366	0.311	35.415	0.048	0.014	100.271	7.068	29.055	100.979
01-JR-MA-182-046	0.039	51.356	0.151	0.421	0.159	0.332	9.812	0.281	36.875	0.041	0.016	99.483	8.648	29.093	100.349
01-JR-MA-182-047	0.030	51.455	0.120	0.200	0.699	0.378	9.694	0.304	36.775	0.043	0.007	99.705	8.192	29.404	100.526
01-JR-MA-182-048	0.056	51.850	0.160	0.230	1.330	0.399	10.719	0.323	34.059	0.068	0.022	99.216	6.752	27.983	99.893
01-JR-MA-182-049	0.007	51.771	0.101	0.216	1.933	0.362	10.941	0.332	33.623	0.102	0.003	99.391	7.015	27.311	100.094
01-JR-MA-182-051	0.043	52.400	0.104	0.250	1.036	0.415	10.343	0.315	35.279	0.051	0.016	100.252	6.837	29.127	100.937
01-JR-MA-182-052	0.028	54.266	0.040	0.369	0.727	0.252	12.342	0.338	31.988	0.085	0.027	100.462	5.730	26.832	101.036
01-JR-MA-182-053	0.018	50.696	0.120	0.276	1.709	0.463	9.718	0.295	36.176	0.072	0.016	99.559	8.229	28.772	100.383
01-JR-MA-182-054	0.019	54.047	0.118	0.330	0.979	0.335	11.833	0.297	32.333	0.095	0.003	100.389	5.038	27.800	100.894
01-JR-MA-183-020	0.046	45.940	0.002	0.829	0.299	0.264	6.590	0.208	44.139	0.095	0.035	98.447	16.036	29.710	100.054
01-JR-MA-183-021	0.036	53.447	0.107	0.418	0.816	0.421	11.444	0.263	32.628	0.050	0.018	99.648	4.963	28.163	100.145
01-JR-MA-183-022	0.032	50.614	0.201	0.129	1.437	0.432	9.629	0.351	36.278	0.044	0.026	99.173	8.229	28.873	99.998
01-JR-MA-183-023	0.021	49.902	0.100	0.185	0.905	0.508	8.759	0.305	38.662	0.062	0.014	99.423	9.826	29.821	100.407
01-JR-MA-183-024	0.042	51.123	0.156	0.383	5.138	0.409	11.848	0.294	30.510	0.169	0.014	100.086	5.844	25.252	100.672
01-JR-MA-184-001	0.015	52.647	0.107	0.343	1.040	0.332	11.213	0.264	33.325	0.061	0.007	99.354	6.266	27.687	99.982
01-JR-MA-184-002	0.033	51.092	0.139	0.281	2.829	0.344	10.427	0.237	34.357	0.118	0.018	99.875	7.368	27.727	100.613
01-JR-MA-187-013	0.048	53.805	0.051	0.505	1.255	0.326	12.487	0.264	30.798	0.142	0.015	99.696	4.951	26.343	100.192
01-JR-MA-187-014	0.016	50.385	0.097	0.293	4.199	0.399	11.082	0.286	32.237	0.142	0.028	99.164	7.083	25.864	99.874
01-JR-MA-187-015	0.026	50.721	0.245	0.208	0.669	0.498	9.362	0.307	36.788	0.029	0.009	98.862	7.917	29.664	99.655
01-JR-MA-187-016	0.049	51.403	0.139	0.304	0.907	0.414	10.290	0.294	35.079	0.054	0.014	98.947	7.436	28.388	99.692
01-JR-MA-190-002	0.032	51.178	0.168	0.254	0.924	0.393	9.954	0.287	35.828	0.046	0.003	99.067	7.825	28.787	99.851
01-JR-MA-191-010	0.015	52.146	0.214	0.363	1.104	0.450	10.764	0.256	34.693	0.084	0.013	100.102	7.083	28.320	100.812
01-JR-MA-193-006	0.052	53.902	0.152	0.661	2.203	0.270	13.326	0.235	28.664	0.135	0.022	99.622	4.083	24.990	100.031
01-JR-MA-193-007	0.042	55.411	0.057	0.549	1.292	0.280	14.689	0.279	27.017	0.119	0.000	99.735	3.564	23.810	100.092
01-JR-MA-194-002	0.013	52.134	0.096	0.236	1.436	0.491	10.622	0.339	34.461	0.101	0.009	99.938	6.736	28.400	100.613
01-JR-MA-195-022	0.039	50.806	0.119	0.262	2.807	0.409	10.572	0.309	33.951	0.115	0.005	99.394	7.457	27.242	100.141
01-JR-MA-196-010	0.043	54.136	0.018	0.502	0.891	0.358	12.272	0.269	31.780	0.116	0.018	100.403	5.257	27.050	100.930

Sample	SiO2	TiO2	Nb2O5	Al2O3	Cr2O3	V2O5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe2O3	FeO	Total
01-JR-MA-201-004	0.043	53.480	0.140	0.344	1.005	0.380	11.721	0.334	32.160	0.089	0.015	99.711	5.100	27.571	100.222
01-JR-MA-201-005	0.021	50.094	0.000	0.592	0.133	0.388	8.695	0.247	39.002	0.034	0.000	99.206	10.107	29.908	100.219
01-JR-MA-210-028	0.029	55.681	0.125	0.556	1.084	0.244	14.504	0.269	27.406	0.109	0.016	100.023	3.353	24.389	100.359
01-JR-MA-210-029	0.035	54.583	0.143	0.252	0.435	0.371	12.194	0.329	31.667	0.046	0.000	100.055	4.343	27.759	100.490
01-JR-MA-210-030	0.108	54.950	0.080	0.595	1.966	0.276	14.144	0.249	27.120	0.182	0.006	99.676	2.991	24.428	99.976
01-JR-MA-210-031	0.026	55.029	0.115	0.531	2.281	0.244	14.383	0.235	27.264	0.187	0.021	100.316	3.673	23.959	100.684
01-JR-MA-212-019	0.038	50.419	0.237	0.220	0.859	0.437	8.847	0.292	38.197	0.033	0.017	99.596	8.861	30.224	100.484
01-JR-MA-212-020	0.032	49.545	0.155	0.182	1.061	0.469	8.689	0.283	38.858	0.057	0.012	99.343	10.217	29.664	100.367
01-JR-MA-212-022	0.020	53.387	0.141	0.240	1.202	0.344	11.460	0.337	32.753	0.070	0.010	99.964	5.406	27.889	100.506
01-JR-MA-212-023	0.030	53.755	0.073	0.449	0.874	0.414	11.571	0.270	32.930	0.073	0.017	100.456	5.335	28.130	100.990
01-JR-MA-212-024	0.032	53.011	0.139	0.284	1.432	0.318	10.991	0.308	33.313	0.071	0.008	99.907	5.474	28.388	100.455
01-JR-MA-212-025	0.034	49.135	0.266	0.147	2.073	0.491	9.398	0.314	37.572	0.073	0.016	99.519	10.483	28.139	100.569
01-JR-MA-212-026	0.036	51.886	0.190	0.232	0.903	0.409	10.257	0.328	35.519	0.055	0.000	99.815	7.367	28.890	100.553
01-JR-MA-212-027	0.055	53.531	0.094	0.682	1.159	0.444	12.182	0.234	31.439	0.089	0.002	99.911	4.962	26.974	100.408
01-JR-MA-212-028	0.040	51.846	0.173	0.220	2.590	0.484	10.519	0.304	34.063	0.102	0.013	100.354	6.227	28.460	100.978
01-JR-MA-212-029	0.024	54.169	0.070	0.320	0.789	0.320	12.281	0.323	31.818	0.094	0.030	100.238	5.363	26.993	100.775
01-JR-MA-212-030	0.010	52.062	0.106	0.297	2.569	0.327	11.056	0.344	33.429	0.112	0.021	100.333	6.830	27.284	101.017
01-JR-MA-212-031	0.020	54.258	0.054	0.562	1.194	0.321	12.731	0.401	30.665	0.125	0.029	100.360	5.026	26.142	100.864
01-JR-MA-212-032	0.018	48.094	0.755	0.058	3.349	0.409	9.077	0.438	36.691	0.146	0.009	99.044	9.697	27.965	100.016
01-JR-MA-212-033	0.020	52.078	0.166	0.206	0.460	0.360	10.253	0.298	35.848	0.034	0.000	99.723	7.613	28.998	100.486
01-JR-MA-212-036	0.036	52.445	0.084	0.392	1.839	0.338	11.357	0.274	32.887	0.120	0.000	99.772	6.322	27.198	100.405
01-JR-MA-212-037	0.029	53.381	0.022	0.564	1.367	0.335	12.034	0.285	31.528	0.124	0.037	99.706	5.359	26.705	100.243
01-JR-MA-212-038	0.024	53.366	0.065	0.542	0.908	0.372	12.643	0.447	30.741	0.092	0.019	99.219	5.726	25.588	99.793
01-JR-MA-212-039	0.033	51.913	0.115	0.235	1.274	0.368	10.473	0.314	34.674	0.067	0.000	99.466	6.992	28.383	100.167
01-JR-MA-212-040	0.016	51.078	0.152	0.215	0.565	0.472	9.514	0.270	36.854	0.039	[illegible]	99.176	8.067	29.595	99.984
01-JR-MA-212-041	0.043	51.079	0.178	0.226	0.776	0.551	9.834	0.310	36.291	0.052	0.009	99.349	7.935	29.151	100.144
01-JR-MA-212-042	0.051	51.981	0.132	0.433	0.580	0.270	9.878	0.291	35.475	0.061	0.012	99.164	6.743	29.408	99.840
01-JR-MA-212-043	0.006	49.074	0.271	0.167	1.527	0.503	8.709	0.313	38.318	0.050	0.007	98.945	9.984	29.334	99.945
01-JR-MA-212-045	0.026	50.934	0.187	0.177	1.698	0.447	9.782	0.351	35.616	0.060	0.015	99.293	7.482	28.884	100.043
01-JR-MA-213-005	0.015	49.436	0.199	0.139	1.753	0.402	9.268	0.304	37.188	0.066	0.012	98.782	9.738	28.426	99.758
01-JR-MA-213-006	0.008	50.773	0.227	0.235	0.918	0.489	10.530	0.313	35.647	0.060	0.000	99.200	9.003	27.546	100.102
01-JR-MA-213-007	0.036	51.733	0.105	0.215	0.918	0.435	9.923	0.302	36.099	0.050	0.010	99.826	7.535	29.319	100.581
01-JR-MA-213-008	0.049	52.613	0.095	0.423	0.558	0.206	10.258	0.311	34.840	0.052	0.010	99.415	6.329	29.145	100.049
01-JR-MA-213-010	0.027	51.235	0.201	0.202	0.441	0.507	9.279	0.309	37.755	0.037	0.018	100.011	8.369	30.224	100.850
01-JR-MA-214-099	0.054	50.868	0.195	0.232	0.985	0.500	10.474	0.262	35.805	0.054	0.000	99.429	8.867	27.826	100.317
01-JR-MA-214-138	0.012	47.773	0.186	0.126	2.393	0.486	8.276	0.271	38.862	0.084	0.018	98.487	11.155	28.824	99.605
01-JR-MA-214-139	0.040	52.339	0.052	0.370	0.196	0.198	10.018	0.303	35.840	0.035	0.025	99.416	7.304	29.268	100.148
01-JR-MA-214-140	0.031	52.078	0.112	0.328	1.620	0.304	10.355	0.263	34.512	0.100	0.015	99.718	6.524	28.641	100.372
01-JR-MA-214-141	0.042	48.834	0.102	0.219	1.095	0.467	8.985	0.327	38.932	0.055	0.000	99.058	11.686	28.417	100.229
01-JR-MA-214-142	0.024	46.514	0.141	0.276	0.389	0.430	6.512	0.229	43.915	0.015	0.007	98.452	14.541	30.831	99.909
01-JR-MA-214-143	0.023	44.847	0.054	0.226	0.381	0.455	5.722	0.225	46.097	0.007	0.019	98.056	17.128	30.685	99.772
01-JR-MA-214-144	0.021	45.885	0.119	0.210	0.361	0.472	6.052	0.232	45.199	0.004	0.005	98.560	15.631	31.134	100.126
01-JR-MA-214-145	0.014	49.941	0.126	0.193	0.791	0.468	8.817	0.291	38.900	0.046	0.009	99.596	10.177	29.743	100.616
01-JR-MA-214-147	0.018	50.121	0.049	0.594	0.615	0.314	9.377	0.252	37.753	0.058	0.015	99.166	10.163	28.608	100.184
01-JR-MA-214-148	0.030	46.880	0.165	0.314	0.380	0.429	7.282	0.212	42.797	0.015	0.004	98.508	14.400	29.840	99.951
01-JR-MA-214-149	0.015	52.356	0.091	0.378	0.625	0.344	10.462	0.264	34.519	0.066	0.019	99.139	6.411	28.750	99.781
01-JR-MA-214-150	0.064	47.995	0.106	0.299	0.340	0.453	7.210	0.262	41.889	0.028	0.017	98.663	12.201	30.911	99.885
01-JR-MA-214-151	0.019	51.555	0.206	0.291	1.120	0.505	10.420	0.275	34.907	0.059	0.036	99.393	7.155	28.469	100.110
01-JR-MA-214-153	0.027	48.286	0.195	0.167	1.903	0.532	8.529	0.326	39.137	0.065	0.004	99.171	11.366	28.910	100.310

Sample	SiO_2	TiO_2	Nb_2O_5	Al_2O_3	Cr_2O_3	V_2O_5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe_2O_3	FeO	Total
01-JR-MA-214-154	0.031	51.050	0.058	0.565	2.854	0.347	10.471	0.302	34.095	0.130	0.010	99.913	7.379	27.456	100.652
01-JR-MA-214-155	0.035	51.415	0.143	0.287	0.897	0.507	10.164	0.287	35.714	0.072	0.013	99.534	7.741	28.749	100.310
01-JR-MA-214-156	0.036	49.886	0.237	0.208	0.808	0.451	8.884	0.319	38.053	0.038	0.002	98.922	9.306	29.679	99.854
01-JR-MA-214-157	0.054	52.208	0.088	0.317	0.880	0.391	10.847	0.322	34.714	0.062	0.013	99.896	7.463	27.999	100.644
01-JR-MA-214-159	0.052	51.320	0.172	0.244	0.640	0.443	9.518	0.343	36.463	0.036	0.014	99.245	7.469	29.742	99.993
01-JR-MA-214-161	0.032	43.197	0.292	0.187	1.520	0.741	6.003	0.244	46.035	0.037	0.009	98.297	18.508	29.382	100.151
01-JR-MA-214-162	0.038	51.518	0.120	0.246	1.482	0.416	10.768	0.337	35.130	0.066	0.014	100.135	8.419	27.554	100.979
01-JR-MA-214-163	0.047	50.963	0.136	0.281	3.453	0.437	11.085	0.308	32.584	0.141	0.010	99.445	6.748	26.512	100.121
01-JR-MA-214-164	0.035	51.441	0.187	0.248	0.783	0.392	9.662	0.315	36.413	0.047	0.007	99.530	7.645	29.534	100.296
01-JR-MA-214-165	0.031	53.548	0.103	0.602	1.505	0.319	12.498	0.272	30.700	0.141	0.025	99.744	5.111	26.101	100.256
01-JR-MA-214-166	0.051	49.587	0.261	0.174	1.933	0.527	9.783	0.332	36.390	0.077	0.009	99.124	9.418	27.915	100.068
01-JR-MA-214-167	0.033	46.163	0.164	0.142	0.877	0.512	6.603	0.281	43.766	0.025	0.023	98.589	14.807	30.442	100.073
01-JR-MA-214-168	0.023	47.385	0.238	0.182	1.423	0.556	7.706	0.272	40.792	0.062	0.027	98.666	12.346	29.683	99.903
01-JR-MA-214-171	0.029	53.107	0.057	0.355	0.497	0.255	11.077	0.303	33.657	0.049	0.016	99.402	6.122	28.148	100.015
01-JR-MA-214-172	0.037	51.277	0.169	0.180	1.787	0.343	9.985	0.335	35.401	0.054	0.009	99.577	7.461	28.687	100.325
01-JR-MA-214-173	0.013	52.115	0.118	0.237	1.190	0.330	10.619	0.311	34.556	0.047	0.019	99.555	7.032	28.229	100.260
01-JR-MA-214-174	0.042	50.769	0.169	0.248	2.494	0.444	10.274	0.315	34.188	0.095	0.015	99.053	7.036	27.857	99.758
01-JR-MA-214-175	0.009	48.262	0.113	0.350	0.324	0.442	7.508	0.240	41.815	0.021	0.007	99.091	12.484	30.582	100.342
01-JR-MA-214-176	0.014	44.417	0.120	0.174	0.371	0.499	5.493	0.249	46.774	0.004	0.020	98.135	17.736	30.815	99.912
01-JR-MA-214-177	0.019	52.640	0.148	0.337	0.870	0.440	10.726	0.296	34.452	0.059	0.030	100.017	6.373	28.718	100.656
01-JR-MA-214-178	0.050	52.207	0.137	0.347	1.074	0.392	10.787	0.309	34.016	0.083	0.011	99.413	6.520	28.149	100.066
01-JR-MA-214-179	0.013	48.149	0.270	0.144	1.949	0.495	8.062	0.315	39.392	0.037	0.007	98.833	10.815	29.660	99.917
01-JR-MA-214-182	0.013	51.690	0.102	0.264	0.794	0.487	10.136	0.290	35.891	0.057	0.023	99.747	7.718	28.946	100.520
01-JR-MA-214-183	0.000	50.122	0.119	0.225	0.789	0.470	8.746	0.302	38.457	0.054	0.003	99.287	9.401	29.998	100.229
01-JR-MA-214-184	0.015	50.498	0.183	0.150	1.671	0.484	9.507	0.382	36.574	0.069	0.011	99.544	8.432	28.986	100.389
01-JR-MA-214-185	0.025	51.805	0.090	0.257	0.762	0.522	11.743	0.256	33.950	0.073	0.000	99.483	8.522	26.282	100.337
01-JR-MA-214-187	0.009	47.106	0.200	0.138	0.937	0.495	7.161	0.324	42.394	0.052	0.004	98.820	13.522	30.227	100.175
01-JR-MA-214-188	0.014	53.085	0.156	0.239	1.247	0.301	11.250	0.344	33.065	0.073	0.001	99.775	5.706	27.931	100.347
01-JR-MA-214-189	0.015	53.111	0.053	0.415	0.643	0.365	11.552	0.297	33.306	0.057	0.000	99.814	6.485	27.471	100.464
01-JR-MA-214-191	0.075	53.313	0.041	0.571	1.141	0.261	12.154	0.275	31.922	0.102	0.014	99.869	6.092	26.441	100.479
01-JR-MA-214-192	0.028	52.255	0.114	0.245	1.665	0.371	10.884	0.278	33.322	0.072	0.007	99.241	5.936	27.981	99.836
01-JR-MA-214-194	0.000	53.442	0.048	0.430	0.228	0.325	12.586	0.356	32.171	0.096	0.014	99.696	7.159	25.730	100.413
01-JR-MA-214-196	0.042	52.980	0.095	0.604	0.938	0.449	11.749	0.221	32.463	0.081	0.013	99.635	5.788	27.255	100.215
01-JR-MA-214-197	0.049	50.885	0.145	0.213	2.338	0.353	10.361	0.293	34.323	0.103	0.023	99.086	7.414	27.652	99.829
01-JR-MA-214-198	0.037	49.606	0.191	0.201	0.713	0.520	8.898	0.305	38.867	0.026	0.016	99.380	10.436	29.476	100.426
01-JR-MA-214-199	0.032	52.399	0.242	0.229	0.664	0.320	10.792	0.329	34.411	0.048	0.013	99.479	6.788	28.303	100.159
01-JR-MA-214-201	0.038	50.821	0.241	0.176	4.882	0.287	12.157	0.344	30.414	0.193	0.011	99.564	6.847	24.253	100.250
01-JR-MA-214-202	0.046	52.974	0.054	0.645	1.189	0.391	11.902	0.262	31.975	0.086	0.020	99.544	5.759	26.793	100.121
01-JR-MA-214-203	0.028	51.472	0.169	0.267	0.803	0.377	10.198	0.318	35.880	0.040	0.000	99.552	8.130	28.565	100.367
01-JR-MA-214-204	0.055	50.063	0.050	0.544	0.171	0.343	8.601	0.277	39.191	0.053	0.024	99.372	10.213	30.001	100.395
01-JR-MA-214-206	0.019	51.061	0.156	0.274	3.287	0.417	11.535	0.328	32.249	0.126	0.012	99.464	7.225	25.748	100.188
01-JR-MA-214-207	0.043	51.700	0.186	0.235	0.696	0.385	9.922	0.313	36.096	0.033	0.011	99.620	7.539	29.313	100.375
01-JR-MA-214-208	0.013	51.271	0.160	0.223	0.629	0.445	9.744	0.312	36.321	0.030	0.005	99.153	7.821	29.284	99.937
01-JR-MA-214-209	0.029	51.163	0.130	0.222	0.716	0.416	9.458	0.332	36.688	0.047	0.016	99.217	7.887	29.591	100.007
01-JR-MA-214-211	0.022	52.007	0.147	0.310	0.937	0.452	10.682	0.245	34.634	0.058	0.005	99.499	7.014	28.323	100.202
01-JR-MA-214-217	0.046	43.022	0.118	0.190	0.287	0.551	5.305	0.211	47.580	0.015	0.019	97.344	19.491	30.042	99.297
01-JR-MA-214-221	0.030	53.245	0.108	0.687	1.255	0.414	12.208	0.237	31.989	0.086	0.022	100.281	6.000	26.591	100.882
01-JR-MA-214-223	0.034	51.806	0.148	0.243	0.729	0.462	9.987	0.285	35.764	0.040	0.018	99.516	7.098	29.377	100.227
01-JR-MA-214-224	0.003	47.509	0.183	0.234	0.472	0.564	7.264	0.285	42.800	0.014	0.009	99.337	13.602	30.561	100.700

Sample	SiO2	TiO2	Nb2O5	Al2O3	Cr2O3	V2O5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe2O3	FeO	Total
01-JR-MA-214-225	0.064	53.700	0.081	0.564	1.284	0.349	12.137	0.259	31.841	0.137	0.010	100.426	5.409	26.974	100.968
01-JR-MA-214-227	0.017	50.457	0.000	0.604	0.159	0.391	8.814	0.289	38.694	0.052	0.014	99.491	9.718	29.950	100.465
01-JR-MA-214-228	0.021	53.895	0.100	0.408	0.707	0.272	12.471	0.282	31.639	0.086	0.011	99.892	5.793	26.427	100.472
01-JR-MA-214-229	0.029	52.613	0.169	0.260	1.050	0.358	10.582	0.306	34.829	0.072	0.017	100.285	6.651	28.844	100.951
01-JR-MA-214-230	0.013	51.551	0.112	0.304	0.921	0.398	9.912	0.275	35.853	0.049	0.023	99.411	7.490	29.114	100.161
01-JR-MA-214-231	0.025	48.620	0.220	0.177	1.584	0.524	8.275	0.293	39.297	0.050	0.013	99.078	10.649	29.715	100.145
01-JR-MA-214-232	0.055	53.320	0.064	0.663	1.070	0.390	12.108	0.255	32.056	0.083	0.009	100.074	5.866	26.778	100.662
01-JR-MA-214-233	0.005	44.825	0.223	0.187	0.911	0.769	6.470	0.259	44.926	0.020	0.014	98.609	16.646	29.948	100.277
01-JR-MA-214-234	0.058	53.700	0.051	0.569	1.531	0.264	12.186	0.275	31.130	0.148	0.000	99.912	4.929	26.695	100.406
01-JR-MA-214-235	0.026	52.855	0.093	0.246	1.243	0.376	11.172	0.331	33.395	0.058	0.015	99.810	6.059	27.943	100.417
01-JR-MA-214-236	0.029	53.373	0.031	0.636	1.111	0.351	12.161	0.300	31.710	0.078	0.015	99.795	5.728	26.555	100.369
01-JR-MA-214-237	0.031	48.746	0.194	0.193	1.121	0.538	8.377	0.306	39.939	0.055	0.030	99.530	11.474	29.615	100.680
01-JR-MA-214-238	0.029	44.452	0.225	0.144	0.984	0.614	5.938	0.259	45.853	0.018	0.000	98.516	17.218	30.360	100.241
01-JR-MA-214-239	0.054	53.695	0.041	0.635	1.080	0.353	12.267	0.251	31.566	0.087	0.025	100.054	5.372	26.732	100.592
01-JR-MA-214-240	0.053	53.713	0.030	0.584	0.956	0.347	12.036	0.256	32.157	0.058	0.031	100.221	5.559	27.155	100.778
01-JR-MA-214-241	0.028	52.952	0.107	0.514	0.395	0.358	11.133	0.314	34.169	0.062	0.012	100.044	6.740	28.105	100.719
01-JR-MA-214-242	0.021	51.288	0.089	0.282	1.040	0.442	9.865	0.266	35.985	0.063	0.009	99.350	7.737	29.023	100.125
01-JR-MA-214-243	0.012	48.041	0.199	0.128	1.903	0.405	7.883	0.332	40.095	0.054	0.019	99.071	11.644	29.618	100.238
01-JR-MA-214-244	0.030	55.156	0.094	0.491	0.905	0.439	13.803	0.396	28.937	0.107	0.016	100.374	4.025	25.315	100.777
01-JR-MA-214-246	0.051	49.811	0.118	0.336	0.445	0.382	8.287	0.273	39.784	0.037	0.014	99.538	10.326	30.493	100.573
01-JR-MA-214-247	0.019	53.241	0.163	0.408	0.835	0.449	11.434	0.288	33.356	0.068	0.012	100.273	5.905	28.042	100.865
01-JR-MA-214-248	0.028	50.311	0.145	0.394	5.545	0.439	11.583	0.282	31.202	0.181	0.013	100.123	6.877	25.014	100.812
01-JR-MA-214-249	0.023	52.152	0.105	0.179	1.400	0.431	11.790	0.315	33.355	0.078	0.000	99.828	7.823	26.316	100.612
01-JR-MA-214-250	0.027	51.582	0.120	0.347	1.099	0.451	10.488	0.278	35.034	0.067	0.007	99.500	7.575	28.218	100.259
01-JR-MA-214-251	0.047	51.757	0.133	0.277	0.993	0.487	9.906	0.287	35.903	0.065	0.011	99.866	7.120	29.497	100.579
01-JR-MA-214-252	0.023	53.770	0.164	0.281	2.645	0.443	13.045	0.311	29.714	0.123	0.019	100.538	4.615	25.561	101.000
01-JR-MA-214-253	0.041	50.380	0.014	0.549	0.163	0.337	8.888	0.260	38.693	0.047	0.005	99.377	9.939	29.749	100.373
01-JR-MA-214-254	0.037	52.282	0.084	0.399	0.395	0.236	10.113	0.293	35.728	0.064	0.012	99.643	7.330	29.132	100.377
01-JR-MA-214-255	0.034	53.180	0.116	0.390	0.751	0.476	11.380	0.313	33.297	0.042	0.021	100.000	5.792	28.085	100.580
01-JR-MA-214-256	0.026	53.363	0.054	0.510	0.958	0.382	11.953	0.270	32.240	0.105	0.031	99.892	5.848	26.978	100.478
01-JR-MA-218-033	0.015	51.017	0.189	0.202	1.662	0.455	9.955	0.306	35.934	0.052	0.006	99.793	8.025	28.713	100.597
01-JR-MA-218-034	0.024	46.764	0.244	0.147	1.950	0.426	7.473	0.319	40.778	0.053	0.023	98.201	12.748	29.307	99.478
01-JR-MA-218-035	0.051	52.133	0.169	0.212	1.217	0.404	10.491	0.300	34.972	0.061	0.002	100.012	6.967	28.703	100.710
01-JR-MA-218-036	0.034	46.518	0.140	0.121	0.827	0.462	6.581	0.295	43.738	0.018	0.039	98.773	14.517	30.675	100.227
01-JR-MA-218-037	0.005	48.566	0.263	0.159	1.617	0.517	8.384	0.300	39.149	0.051	0.000	99.011	10.738	29.487	100.087
01-JR-MA-218-038	0.037	53.344	0.044	0.535	0.853	0.385	11.904	0.315	32.128	0.103	0.011	99.659	5.667	27.029	100.227
01-JR-MA-218-039	0.015	49.280	0.157	0.139	1.457	0.476	8.866	0.364	38.353	0.052	0.006	99.165	10.359	29.032	100.203
01-JR-MA-218-041	0.060	50.577	0.152	0.288	1.610	0.392	9.729	0.274	36.248	0.073	0.028	99.431	8.469	28.627	100.280
01-JR-MA-225-003	0.018	47.743	0.000	0.771	0.774	0.266	7.557	0.230	41.251	0.170	0.010	98.790	13.056	29.503	100.098
01-JR-MA-225-004	0.040	46.954	0.000	0.730	0.696	0.279	6.830	0.288	42.795	0.084	0.014	98.710	14.046	30.156	100.117
01-JR-MA-225-005	0.042	47.497	0.025	0.700	0.414	0.185	7.523	0.236	42.240	0.126	0.020	99.008	14.384	29.297	100.449
01-JR-MA-225-006	0.030	46.780	0.051	0.858	0.383	0.188	6.953	0.180	42.743	0.076	0.013	98.255	14.387	29.798	99.696
01-JR-MA-225-007	0.028	44.899	0.000	0.943	0.246	0.244	6.308	0.190	45.371	0.061	0.018	98.308	17.875	29.287	100.099
01-JR-MA-225-008	0.037	47.042	0.000	0.834	0.418	0.225	7.159	0.239	42.337	0.099	0.016	98.406	14.162	29.594	99.825
01-JR-MA-225-009	0.035	45.807	0.000	0.904	0.321	0.299	6.838	0.206	43.904	0.078	0.020	98.412	16.320	29.220	100.047
01-JR-MA-225-010	0.031	45.421	0.017	0.917	0.267	0.269	6.644	0.221	44.339	0.073	0.031	98.230	16.864	29.164	99.920
01-JR-MA-225-011	0.040	47.843	0.000	0.800	0.907	0.254	7.609	0.242	40.938	0.155	0.017	98.805	12.708	29.504	100.078
01-JR-MA-225-012	0.025	47.336	0.056	0.875	0.671	0.265	7.374	0.241	41.931	0.142	0.033	98.949	13.787	29.526	100.330
01-JR-MA-225-013	0.023	47.827	0.054	0.796	0.444	0.203	7.345	0.243	41.645	0.098	0.020	98.698	12.977	29.968	99.998

Sample	SiO_2	TiO_2	Nb_2O_5	Al_2O_3	Cr_2O_3	V_2O_5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe_2O_3	FeO	Total
01-JR-MA-225-014	0.039	46.680	0.025	0.711	0.423	0.255	6.867	0.235	43.142	0.102	0.042	98.521	14.779	29.843	100.002
01-JR-MA-225-015	0.007	47.384	0.060	0.691	0.541	0.204	6.584	0.350	42.929	0.074	0.025	98.849	13.452	30.825	100.197
01-JR-MA-225-016	0.026	45.050	0.000	0.805	0.468	0.248	5.988	0.280	45.289	0.076	0.031	98.261	17.125	29.879	99.977
01-JR-MA-225-017	0.025	46.956	0.053	0.842	0.420	0.175	7.069	0.233	42.964	0.092	0.034	98.863	14.810	29.637	100.347
01-JR-MA-225-018	0.002	47.488	0.024	0.789	0.512	0.148	7.160	0.262	42.187	0.101	0.019	98.692	13.736	29.827	100.068
01-JR-MA-225-019	0.044	46.639	0.000	0.912	0.472	0.227	7.125	0.271	42.916	0.085	0.031	98.722	15.164	29.271	100.241
01-JR-MA-225-020	0.025	46.774	0.001	0.859	0.247	0.268	7.225	0.204	43.274	0.053	0.044	98.974	15.480	29.345	100.525
01-JR-MA-225-021	0.057	46.514	0.011	0.885	0.404	0.255	6.975	0.198	43.526	0.090	0.013	98.928	15.496	29.583	100.481
01-JR-MA-225-022	0.014	45.744	0.007	0.915	0.313	0.183	6.522	0.206	44.405	0.062	0.000	98.371	16.500	29.558	100.024
01-JR-MA-225-023	0.050	47.051	0.000	0.778	0.571	0.180	6.993	0.254	42.676	0.087	0.034	98.674	14.285	29.822	100.105
01-JR-MA-225-024	0.035	47.668	0.000	0.795	0.705	0.190	7.662	0.186	41.281	0.125	0.019	98.666	13.395	29.228	100.008
01-JR-MA-225-025	0.043	45.542	0.008	0.910	0.340	0.171	6.763	0.197	44.338	0.074	0.032	98.418	17.120	28.933	100.133
01-JR-MA-225-026	0.032	46.896	0.010	0.853	0.441	0.211	7.028	0.239	42.877	0.093	0.028	98.708	14.674	29.674	100.178
01-JR-MA-225-027	0.043	46.459	0.000	0.864	0.529	0.245	7.180	0.206	42.916	0.106	0.021	98.569	15.362	29.093	100.108
01-JR-MA-225-028	0.047	46.076	0.027	0.902	0.382	0.174	7.046	0.157	43.651	0.080	0.009	98.551	16.289	28.994	100.183
01-JR-MA-225-029	0.028	47.689	0.007	0.755	0.738	0.215	6.977	0.281	42.098	0.095	0.021	98.904	12.959	30.438	100.202
01-JR-MA-225-030	0.025	45.647	0.064	0.851	0.316	0.279	6.160	0.311	44.568	0.075	0.047	98.343	15.988	30.182	99.945
01-JR-MA-225-031	0.058	46.823	0.067	0.699	0.781	0.000	7.023	0.284	42.218	0.096	0.011	98.060	14.309	29.343	99.494
01-JR-MA-225-032	0.023	47.515	0.018	0.827	0.521	0.218	7.332	0.214	41.901	0.130	0.000	98.699	13.546	29.712	100.056
01-JR-MA-225-033	0.030	44.807	0.056	0.800	0.153	0.254	5.853	0.337	46.067	0.049	0.033	98.439	17.920	29.943	100.234
01-JR-MA-225-034	0.018	46.921	0.000	0.777	0.161	0.263	6.724	0.291	43.405	0.086	0.026	98.672	14.622	30.248	100.137
01-JR-MA-225-035	0.020	46.561	0.012	0.838	0.723	0.230	7.421	0.195	42.263	0.147	0.016	98.426	15.081	28.693	99.937
01-JR-MA-225-036	0.044	44.859	0.017	0.992	0.422	0.206	6.419	0.215	44.536	0.076	0.005	97.791	17.264	29.002	99.521
01-JR-MA-225-037	0.019	46.313	0.000	0.865	0.411	0.241	6.798	0.188	42.936	0.085	0.030	97.886	14.779	29.638	99.367
01-JR-MA-225-038	0.009	46.161	0.051	0.910	0.170	0.211	6.603	0.210	44.670	0.063	0.018	99.076	16.466	29.854	100.726
01-JR-MA-225-039	0.019	46.674	0.014	0.862	0.407	0.169	7.067	0.191	42.871	0.081	0.012	98.367	14.970	29.401	99.867
01-JR-MA-225-040	0.009	46.715	0.000	0.869	0.581	0.252	7.214	0.187	42.451	0.132	0.017	98.427	14.692	29.231	99.899
01-JR-MA-225-041	0.023	46.611	0.002	0.900	0.831	0.147	7.329	0.180	41.921	0.132	0.024	98.100	14.597	28.786	99.563
01-JR-MA-225-042	0.020	47.099	0.043	0.837	0.356	0.254	6.989	0.263	42.774	0.093	0.022	98.750	14.201	29.996	100.173
01-JR-MA-225-043	0.011	47.156	0.017	0.852	0.544	0.193	7.275	0.208	42.466	0.116	0.023	98.861	14.482	29.435	100.312
01-JR-MA-225-044	0.022	44.692	0.010	0.921	0.271	0.252	6.247	0.251	45.365	0.058	0.012	98.101	17.996	29.172	99.904
01-JR-MA-225-045	0.046	44.684	0.000	0.929	0.270	0.297	6.401	0.241	45.346	0.065	0.014	98.293	18.187	28.981	100.115
01-JR-MA-225-046	0.025	45.991	0.017	0.868	0.170	0.270	6.803	0.212	43.966	0.049	0.014	98.385	16.149	29.435	100.003
01-JR-MA-225-047	0.041	47.373	0.000	0.801	0.818	0.177	7.568	0.172	41.615	0.125	0.026	98.716	13.880	29.125	100.107
01-JR-MA-225-048	0.031	45.724	0.003	0.936	0.243	0.273	6.637	0.207	44.187	0.075	0.022	98.338	16.366	29.461	99.978
01-JR-MA-225-049	0.019	46.292	0.016	0.835	0.778	0.222	6.279	0.324	43.610	0.079	0.015	98.469	14.667	30.412	99.939
01-JR-MA-225-050	0.048	46.771	0.000	0.844	0.644	0.290	7.153	0.215	42.574	0.106	0.022	98.667	14.542	29.489	100.124
01-JR-MA-225-051	0.029	47.290	0.000	0.807	0.427	0.272	7.154	0.244	42.503	0.115	0.039	98.880	14.063	29.849	100.289
01-JR-MA-225-052	0.027	45.103	0.011	0.923	0.135	0.300	6.411	0.197	45.001	0.055	0.016	98.179	17.354	29.386	99.918
01-JR-MA-225-053	0.019	46.941	0.000	0.854	0.665	0.212	7.200	0.218	42.506	0.116	0.021	98.752	14.579	29.388	100.213
01-JR-MA-225-054	0.021	47.328	0.012	0.837	0.523	0.187	7.387	0.203	42.240	0.112	0.019	98.869	14.270	29.400	100.299
01-JR-MA-225-055	0.041	47.349	0.029	0.832	0.398	0.226	7.191	0.206	42.609	0.107	0.016	99.004	14.151	29.876	100.422
01-JR-MA-225-056	0.019	46.726	0.068	0.720	0.576	0.224	6.511	0.319	43.442	0.065	0.038	98.708	14.442	30.447	100.155
01-JR-MA-225-057	0.064	45.968	0.000	0.876	0.217	0.403	6.506	0.218	44.538	0.055	0.015	98.860	15.969	30.169	100.460
01-JR-MA-225-058	0.011	46.056	0.030	0.897	0.231	0.255	6.671	0.210	43.835	0.057	0.019	98.272	15.717	29.692	99.847
01-JR-MA-225-059	0.010	45.711	0.000	0.880	0.163	0.233	6.554	0.194	44.628	0.048	0.019	98.440	16.760	29.547	100.119
01-JR-MA-225-060	0.034	46.035	0.000	0.878	0.268	0.248	6.521	0.209	43.847	0.067	0.003	98.110	15.466	29.930	99.660
01-JR-MA-225-061	0.025	46.491	0.013	0.761	0.242	0.197	6.923	0.242	43.221	0.068	0.024	98.207	15.256	29.494	99.736
01-JR-MA-225-062	0.015	48.105	0.012	0.777	0.382	0.192	7.441	0.231	41.486	0.124	0.021	98.786	12.808	29.961	100.069

Sample	SiO2	TiO2	Nb2O5	Al2O3	Cr2O3	V2O5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe2O3	FeO	Total
01-JR-MA-225-063	0.027	46.070	0.028	0.832	0.332	0.209	6.739	0.218	43.889	0.079	0.021	98.444	15.995	29.497	100.047
01-JR-MA-225-064	0.017	45.533	0.000	0.915	0.189	0.235	6.479	0.209	45.159	0.048	0.032	98.816	17.396	29.505	100.559
01-JR-MA-225-065	0.028	47.267	0.000	0.796	0.783	0.209	7.371	0.230	41.706	0.119	0.031	98.540	13.722	29.359	99.915
01-JR-MA-225-066	0.007	45.610	0.043	0.930	0.234	0.262	6.662	0.233	44.314	0.080	0.016	98.391	16.703	29.285	100.064
01-JR-MA-225-067	0.021	46.982	0.074	0.772	1.101	0.239	7.192	0.255	41.314	0.130	0.015	98.095	13.109	29.519	99.408
01-JR-MA-225-068	0.026	47.538	0.000	0.740	0.508	0.214	7.644	0.205	40.891	0.117	0.031	97.914	13.050	29.149	99.221
01-JR-MA-225-069	0.024	47.402	0.000	0.861	0.564	0.191	7.350	0.204	42.443	0.094	0.027	99.160	14.342	29.538	100.597
01-JR-MA-225-070	0.022	47.662	0.021	0.854	0.484	0.250	7.409	0.209	42.019	0.119	0.031	99.080	13.638	29.748	100.446
01-JR-MA-225-071	0.031	46.467	0.000	0.882	0.304	0.219	6.967	0.181	43.720	0.082	0.020	98.873	15.833	29.473	100.459
01-JR-MA-225-072	0.047	46.353	0.000	0.848	0.338	0.218	7.001	0.205	43.501	0.058	0.016	98.585	15.749	29.330	100.163
01-JR-MA-225-073	0.048	46.661	0.003	0.900	0.340	0.251	7.346	0.183	43.337	0.100	0.010	99.179	15.893	29.036	100.771
01-JR-MA-225-074	0.079	46.343	0.002	0.714	0.055	0.266	7.042	0.155	44.232	0.054	0.009	98.951	16.456	29.425	100.600
01-JR-MA-225-075	0.035	45.648	0.000	0.963	0.288	0.207	6.744	0.224	44.664	0.067	0.027	98.867	17.314	29.085	100.602
01-JR-MA-225-076	0.055	46.169	0.000	0.808	0.409	0.257	6.194	0.291	44.657	0.076	0.029	98.945	15.669	30.558	100.515
01-JR-MA-225-077	0.127	45.580	0.016	0.925	0.354	0.260	6.467	0.292	44.769	0.081	0.005	98.876	16.785	29.666	100.558
01-JR-MA-225-078	0.024	47.501	0.017	0.764	0.472	0.204	6.871	0.344	42.456	0.091	0.028	98.772	13.421	30.380	100.117
01-JR-MA-225-079	0.083	47.255	0.000	0.827	0.517	0.285	6.754	0.289	43.003	0.096	0.033	99.142	13.791	30.594	100.524
01-JR-MA-225-080	0.036	46.840	0.050	0.878	0.719	0.220	7.265	0.195	42.417	0.130	0.027	98.777	14.608	29.273	100.241
01-JR-MA-225-081	0.043	46.380	0.049	0.696	0.565	0.286	6.342	0.320	44.299	0.065	0.046	99.091	15.297	30.535	100.624
01-JR-MA-225-082	0.015	46.260	0.039	0.891	0.371	0.213	7.020	0.200	44.276	0.063	0.026	99.374	16.754	29.200	101.053
01-JR-MA-225-083	0.019	45.920	0.026	0.863	0.109	0.207	6.547	0.288	44.767	0.084	0.025	98.855	16.845	29.610	100.543
01-JR-MA-225-084	0.028	46.367	0.021	0.880	0.239	0.254	6.975	0.225	43.582	0.071	0.024	98.666	15.754	29.406	100.244
01-JR-MA-225-085	0.042	46.590	0.002	0.812	0.581	0.249	7.124	0.267	43.104	0.094	0.024	98.889	15.380	29.265	100.430
01-JR-MA-225-086	0.022	47.722	0.006	0.825	0.676	0.185	7.640	0.229	41.532	0.135	0.017	98.989	13.652	29.248	100.357
01-JR-MA-225-087	0.038	46.175	0.000	0.822	0.518	0.262	6.567	0.285	44.139	0.080	0.020	98.906	15.828	29.897	100.492
01-JR-MA-225-088	0.042	45.797	0.000	0.907	0.245	0.297	6.792	0.174	44.185	0.070	0.020	98.529	16.500	29.338	100.182
01-JR-MA-225-089	0.030	47.611	0.000	0.850	1.036	0.173	7.444	0.258	41.414	0.143	0.007	98.966	13.293	29.453	100.298
01-JR-MA-225-090	0.038	47.684	0.000	0.775	0.665	0.214	7.228	0.251	42.055	0.116	0.037	99.063	13.414	29.985	100.407
01-JR-MA-225-091	0.041	45.975	0.032	0.861	0.393	0.228	6.623	0.239	43.990	0.091	0.023	98.496	15.954	29.635	100.094
01-JR-MA-225-092	0.013	47.383	0.036	0.804	0.420	0.213	7.262	0.263	42.555	0.109	0.032	99.090	14.331	29.660	100.526
01-JR-MA-225-093	0.052	45.906	0.004	0.889	0.680	0.199	6.954	0.160	43.680	0.094	0.034	98.652	16.329	28.987	100.288
01-JR-MA-225-094	0.049	47.392	0.000	0.821	0.385	0.193	7.462	0.193	42.398	0.095	0.037	99.025	14.485	29.364	100.476
01-JR-MA-225-095	0.029	47.568	0.030	0.834	0.594	0.132	7.700	0.186	41.549	0.129	0.017	98.768	13.944	29.002	100.165
01-JR-MA-225-096	0.017	44.813	0.000	0.999	0.325	0.284	6.450	0.170	45.217	0.056	0.034	98.365	18.004	29.017	100.169
01-JR-MA-225-097	0.029	46.154	0.037	0.867	0.321	0.249	6.996	0.181	43.848	0.059	0.027	98.768	16.233	29.241	100.394
01-JR-MA-225-098	0.042	47.565	0.021	0.826	0.931	0.261	7.728	0.199	41.488	0.128	0.017	99.206	13.715	29.147	100.580
01-JR-MA-225-099	0.037	45.823	0.022	0.949	0.271	0.256	6.929	0.208	44.159	0.047	0.020	98.721	16.783	29.058	100.402
01-JR-MA-225-100	0.026	47.034	0.000	0.843	0.595	0.186	7.297	0.219	42.307	0.122	0.019	98.648	14.499	29.261	100.101
01-JR-MA-225-101	0.054	46.986	0.015	0.760	0.342	0.202	6.809	0.290	43.303	0.086	0.003	98.850	14.629	30.139	100.316
01-JR-MA-225-102	0.048	46.014	0.000	0.899	0.334	0.271	6.648	0.190	44.143	0.069	0.017	98.633	16.003	29.743	100.236
01-JR-MA-225-103	0.040	45.090	0.028	0.926	0.352	0.276	6.210	0.262	45.242	0.075	0.023	98.524	17.342	29.637	100.262
01-JR-MA-225-104	0.066	47.318	0.018	0.829	0.602	0.238	7.306	0.217	42.270	0.104	0.029	98.997	14.014	29.660	100.401
01-JR-MA-225-105	0.044	47.500	0.000	0.837	0.636	0.209	7.691	0.185	41.943	0.131	0.019	99.195	14.316	29.062	100.629
01-JR-MA-225-106	0.050	46.565	0.041	0.871	0.403	0.163	6.923	0.210	43.442	0.105	0.016	98.789	15.416	29.571	100.334
01-JR-MA-225-107	0.025	46.867	0.000	0.912	0.366	0.226	7.169	0.253	43.201	0.082	0.030	99.131	15.343	29.395	100.668
01-JR-MA-225-108	0.018	47.522	0.000	0.851	0.254	0.240	7.418	0.218	42.571	0.114	0.019	99.225	14.450	29.569	100.673
01-JR-MA-225-109	0.020	46.984	0.000	0.753	0.509	0.233	6.607	0.308	43.191	0.070	0.001	98.676	14.117	30.489	100.090
01-JR-MA-225-110	0.031	45.760	0.000	0.912	0.357	0.302	6.850	0.208	44.409	0.087	0.039	98.955	16.982	29.128	100.656
01-JR-MA-225-111	0.022	45.164	0.000	0.916	0.401	0.285	6.514	0.202	44.951	0.085	0.018	98.558	17.527	29.180	100.314

Sample	SiO_2	TiO_2	Nb_2O_5	Al_2O_3	Cr_2O_3	V_2O_5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe_2O_3	FeO	Total
01-JR-MA-225-112	0.023	46.207	0.000	0.885	0.296	0.208	6.832	0.240	43.586	0.084	0.028	98.389	15.783	29.385	99.970
01-JR-MA-225-113	0.033	46.111	0.000	0.866	0.308	0.298	6.759	0.235	44.088	0.083	0.032	98.813	16.118	29.585	100.428
01-JR-MA-225-114	0.028	46.724	0.024	0.859	0.499	0.203	7.215	0.207	43.222	0.087	0.023	99.091	15.554	29.226	100.649
01-JR-MA-225-115	0.037	47.270	0.000	0.839	0.404	0.220	7.480	0.182	42.160	0.104	0.018	98.714	14.326	29.270	100.149
01-JR-MA-225-116	0.029	46.679	0.000	0.798	0.501	0.273	6.661	0.278	43.281	0.096	0.024	98.620	14.563	30.177	100.079
01-JR-MA-225-117	0.035	47.310	0.000	0.860	0.571	0.229	7.481	0.233	42.158	0.108	0.010	98.995	14.326	29.267	100.430
01-JR-MA-225-118	0.033	47.535	0.017	0.825	0.355	0.207	7.176	0.239	42.082	0.102	0.028	98.599	13.452	29.978	99.947
01-JR-MA-225-119	0.028	45.737	0.001	0.889	0.337	0.267	6.609	0.241	44.587	0.083	0.034	98.813	16.818	29.454	100.498
01-JR-MA-225-120	0.048	46.659	0.000	0.685	0.763	0.203	6.371	0.321	43.759	0.074	0.019	98.902	14.658	30.570	100.371
01-JR-MA-225-121	0.036	46.502	0.059	0.830	0.505	0.250	6.589	0.254	43.576	0.093	0.024	98.718	14.855	30.209	100.206
01-JR-MA-225-122	0.029	47.501	0.055	0.809	0.461	0.200	7.068	0.276	42.783	0.100	0.026	99.308	14.060	30.132	100.717
01-JR-MA-225-123	0.036	46.960	0.002	0.880	0.504	0.255	7.330	0.239	42.646	0.113	0.023	98.988	14.895	29.244	100.480
01-JR-MA-225-124	0.043	46.578	0.021	0.830	0.318	0.248	6.821	0.226	43.696	0.074	0.043	98.898	15.379	29.858	100.439
01-JR-MA-225-125	0.032	47.014	0.000	0.527	0.500	0.173	6.195	0.353	44.390	0.095	0.027	99.306	14.796	31.077	100.788
01-JR-MA-225-126	0.034	47.053	0.066	0.853	0.614	0.221	7.353	0.253	42.438	0.106	0.025	99.016	14.612	29.290	100.480
01-JR-MA-225-127	0.037	47.473	0.016	0.673	0.487	0.195	6.436	0.343	43.478	0.064	0.032	99.234	13.697	31.154	100.606
01-JR-MA-225-128	0.007	47.143	0.034	0.748	0.461	0.179	6.560	0.308	43.263	0.075	0.036	98.814	14.056	30.616	100.222
01-JR-MA-225-129	0.044	47.999	0.001	0.821	0.455	0.210	7.791	0.226	41.316	0.119	0.016	98.998	13.346	29.308	100.335
01-JR-MA-225-130	0.023	45.831	0.050	0.878	0.287	0.256	6.463	0.257	44.373	0.071	0.031	98.520	16.166	29.827	100.140
01-JR-MA-225-131	0.029	47.553	0.000	0.785	0.716	0.227	7.458	0.263	41.608	0.124	0.018	98.781	13.497	29.464	100.133
01-JR-MA-225-132	0.048	47.312	0.053	0.870	0.558	0.157	7.287	0.228	42.277	0.104	0.016	98.910	14.113	29.578	100.324
01-JR-MA-225-133	0.030	45.038	0.000	0.968	0.253	0.254	6.294	0.202	45.324	0.059	0.032	98.454	17.661	29.432	100.224
01-JR-MA-225-134	0.029	46.624	0.000	0.867	0.398	0.210	7.071	0.243	43.021	0.072	0.014	98.549	15.177	29.365	100.070
01-JR-MA-225-135	0.027	47.422	0.009	0.700	0.827	0.195	6.885	0.309	42.468	0.086	0.032	98.960	13.521	30.301	100.315
01-JR-MA-225-136	0.030	47.190	0.000	0.873	0.552	0.304	7.353	0.162	42.418	0.114	0.042	99.038	14.314	29.538	100.472
01-JR-MA-225-137	0.014	46.536	0.000	0.904	0.787	0.264	6.932	0.287	42.766	0.102	0.029	98.621	14.727	29.514	100.097
01-JR-MA-225-138	0.023	46.675	0.030	0.864	0.392	0.184	6.708	0.283	43.116	0.086	0.005	98.366	14.581	29.996	99.827
01-JR-MA-225-139	0.040	46.744	0.013	0.871	0.447	0.250	7.298	0.148	42.602	0.101	0.014	98.528	14.864	29.227	100.017
01-JR-MA-225-140	0.054	47.339	0.003	0.846	0.529	0.264	7.490	0.213	41.836	0.120	0.022	98.716	13.869	29.357	100.106
01-JR-MA-225-141	0.003	46.208	0.000	0.891	0.200	0.176	6.690	0.236	43.835	0.063	0.019	98.321	15.824	29.596	99.906
01-JR-MA-225-142	0.034	47.397	0.025	0.814	0.640	0.233	7.444	0.214	41.822	0.118	0.020	98.761	13.756	29.444	100.139
01-JR-MA-225-143	0.014	45.273	0.000	0.945	0.367	0.276	6.444	0.192	44.224	0.059	0.037	97.831	16.477	29.397	99.482
01-JR-MA-225-144	0.052	45.986	0.019	0.836	0.386	0.228	6.674	0.246	43.763	0.086	0.023	98.299	15.795	29.551	99.882
01-JR-MA-225-145	0.021	45.885	0.071	0.936	0.314	0.239	6.942	0.208	43.773	0.065	0.013	98.467	16.322	29.086	100.102
01-JR-MA-225-146	0.041	47.298	0.048	0.840	0.414	0.224	7.508	0.204	42.089	0.107	0.031	98.804	14.245	29.271	100.231
01-JR-MA-225-147	0.035	47.780	0.028	0.776	0.637	0.198	7.159	0.249	41.969	0.075	0.041	98.947	13.042	30.233	100.254
01-JR-MA-225-148	0.034	47.039	0.032	0.842	0.492	0.164	7.010	0.273	42.595	0.088	0.016	98.585	14.256	29.767	100.013
01-JR-MA-225-149	0.045	46.875	0.041	0.779	0.428	0.233	7.100	0.258	42.430	0.092	0.028	98.309	14.268	29.592	99.738
01-JR-MA-225-150	0.035	46.482	0.006	0.924	0.312	0.279	6.990	0.192	43.456	0.090	0.030	98.796	15.483	29.524	100.347
01-JR-MA-225-151	0.045	45.681	0.048	0.867	0.211	0.277	6.566	0.271	44.520	0.080	0.014	98.580	16.628	29.558	100.246
01-JR-MA-225-152	0.013	45.360	0.000	0.975	0.221	0.272	6.499	0.184	44.591	0.057	0.032	98.204	16.900	29.385	99.897
01-JR-MA-225-153	0.040	47.214	0.000	0.898	0.495	0.292	7.566	0.200	41.985	0.102	0.021	98.813	14.248	29.165	100.241
01-JR-MA-225-154	0.038	47.364	0.000	0.858	0.424	0.227	7.335	0.217	42.232	0.094	0.044	98.833	14.065	29.576	100.242
01-JR-MA-225-155	0.026	45.326	0.000	0.950	0.265	0.226	6.788	0.221	44.808	0.055	0.019	98.684	17.837	28.758	100.471
01-JR-MA-225-156	0.030	47.199	0.035	0.868	0.550	0.266	7.463	0.180	41.972	0.105	0.020	98.688	14.041	29.338	100.095
01-JR-MA-225-157	0.056	47.374	0.027	0.823	0.661	0.217	7.243	0.262	41.964	0.103	0.029	98.759	13.582	29.743	100.120
01-JR-MA-225-158	0.029	46.427	0.000	0.801	0.453	0.252	6.651	0.279	43.815	0.101	0.011	98.819	15.419	29.941	100.364
01-JR-MA-225-159	0.048	47.256	0.029	0.801	0.494	0.212	7.223	0.258	42.182	0.074	0.027	98.604	13.882	29.691	99.995
01-JR-MA-225-160	0.022	46.038	0.031	0.933	0.316	0.223	6.639	0.196	44.526	0.062	0.020	99.006	16.471	29.705	100.656

Sample	SiO2	TiO2	Nb2O5	Al2O3	Cr2O3	V2O3	MgO	MnO	FeO*	NiO	ZnO	Total	Fe2O3	FeO	Total
01-JR-MA-225-161	0.053	46.159	0.026	1.106	0.111	0.229	6.788	0.239	43.875	0.044	0.024	98.654	15.909	29.560	100.248
01-JR-MA-225-162	0.062	46.142	0.000	0.880	0.298	0.267	6.554	0.246	44.416	0.073	0.020	98.958	16.051	29.973	100.566
01-JR-MA-225-163	0.037	47.519	0.000	0.806	0.482	0.222	7.073	0.281	42.367	0.097	0.012	98.896	13.595	30.134	100.258
01-JR-MA-225-164	0.027	45.207	0.004	0.960	0.236	0.289	6.667	0.174	44.770	0.087	0.012	98.433	17.532	28.995	100.190
01-JR-MA-225-165	0.039	46.611	0.000	0.875	0.776	0.190	7.499	0.179	42.637	0.121	0.035	98.962	15.633	28.570	100.528
01-JR-MA-225-166	0.033	45.973	0.000	0.927	0.343	0.253	6.633	0.213	43.762	0.063	0.041	98.241	15.686	29.648	99.813
01-JR-MA-225-167	0.038	47.171	0.060	0.814	0.611	0.226	7.115	0.251	42.187	0.090	0.024	98.587	13.716	29.845	99.961
01-JR-MA-225-168	0.035	47.560	0.000	0.820	0.547	0.216	7.489	0.242	41.753	0.133	0.022	98.817	13.713	29.414	100.191
01-JR-MA-225-169	0.040	45.920	0.017	0.882	0.214	0.170	6.690	0.252	44.357	0.082	0.030	98.654	16.682	29.346	100.325
01-JR-MA-225-170	0.036	46.347	0.070	0.882	0.777	0.216	6.876	0.198	42.470	0.101	0.035	98.008	14.352	29.556	99.446
01-JR-MA-225-171	0.021	48.047	0.026	0.793	0.437	0.226	7.590	0.216	41.407	0.108	0.012	98.883	12.946	29.758	100.180
01-JR-MA-225-172	0.023	46.904	0.001	0.889	0.595	0.168	7.396	0.202	42.605	0.110	0.028	98.921	15.167	28.958	100.441
01-JR-MA-225-173	0.048	44.475	0.021	0.957	0.303	0.225	6.192	0.166	45.572	0.043	0.015	98.017	18.225	29.173	99.843
01-JR-MA-225-174	0.043	47.456	0.003	0.853	0.251	0.159	7.411	0.241	42.234	0.059	0.017	98.727	14.198	29.458	100.150
01-JR-MA-225-175	0.066	45.424	0.000	0.902	0.173	0.188	6.688	0.178	44.379	0.051	0.019	98.068	17.025	29.059	99.774
01-JR-MA-225-176	0.033	46.634	0.034	0.862	0.281	0.211	6.758	0.247	43.726	0.082	0.022	98.890	15.305	29.954	100.423
01-JR-MA-225-177	0.031	48.103	0.011	0.782	0.473	0.188	7.825	0.210	40.698	0.105	0.021	98.447	12.638	29.326	99.713
01-JR-MA-225-178	0.033	45.953	0.000	0.914	0.347	0.170	6.965	0.152	43.641	0.061	0.017	98.253	16.280	28.992	99.884
01-JR-MA-225-179	0.048	46.349	0.000	0.835	0.330	0.256	6.956	0.280	42.994	0.090	0.030	98.168	15.164	29.349	99.687
01-JR-MA-225-180	0.020	47.559	0.012	0.671	0.796	0.177	6.829	0.267	42.487	0.116	0.004	98.938	13.289	30.529	100.269
01-JR-MA-225-181	0.044	44.756	0.023	0.963	0.455	0.277	6.711	0.150	45.059	0.104	0.008	98.550	18.354	28.544	100.389
01-JR-MA-225-182	0.066	47.060	0.032	0.890	0.752	0.191	7.323	0.260	41.925	0.130	0.017	98.646	14.052	29.281	100.054
01-JR-MA-225-183	0.020	46.054	0.000	0.950	0.499	0.275	7.050	0.204	43.162	0.132	0.022	98.368	15.787	28.956	99.950
01-JR-MA-225-184	0.038	45.263	0.000	0.899	0.275	0.238	6.420	0.218	44.815	0.085	0.008	98.259	17.160	29.374	99.978
01-JR-MA-225-185	0.044	46.942	0.027	0.859	0.711	0.209	6.967	0.244	42.610	0.100	0.035	98.748	14.197	29.835	100.170
01-JR-MA-225-186	0.034	46.281	0.000	0.862	0.530	0.238	6.615	0.274	43.746	0.095	0.035	98.710	15.446	29.847	100.258
01-JR-MA-225-187	0.055	48.085	0.021	0.801	0.391	0.158	7.691	0.222	41.354	0.116	0.023	98.917	13.156	29.516	100.235
01-JR-MA-225-188	0.021	46.846	0.019	0.848	0.611	0.295	6.842	0.243	42.521	0.094	0.032	98.372	13.825	30.081	99.757
01-JR-MA-225-189	0.044	47.035	0.000	0.809	0.306	0.204	6.770	0.299	43.075	0.083	0.008	98.633	14.289	30.217	100.065
01-JR-MA-225-190	0.015	47.537	0.010	0.806	0.517	0.212	7.246	0.245	41.562	0.118	0.032	98.300	13.062	29.809	99.609
01-JR-MA-225-191	0.030	46.937	0.002	0.869	0.766	0.278	7.465	0.218	42.036	0.119	0.022	98.742	14.456	29.028	100.190
01-JR-MA-225-192	0.045	47.741	0.046	0.816	0.848	0.199	7.576	0.222	41.016	0.115	0.017	98.641	12.800	29.498	99.923
01-JR-MA-225-193	0.071	45.868	0.035	0.807	0.335	0.293	6.194	0.310	44.738	0.068	0.023	98.742	15.940	30.395	100.339
01-JR-MA-225-194	0.033	45.887	0.000	0.906	0.293	0.237	6.839	0.208	43.896	0.073	0.029	98.401	16.350	29.184	100.039
01-JR-MA-225-195	0.030	47.547	0.000	0.869	0.623	0.143	7.613	0.177	41.706	0.135	0.023	98.866	13.984	29.123	100.267
01-JR-MA-225-196	0.026	45.133	0.025	0.974	0.376	0.208	6.459	0.197	44.878	0.066	0.000	98.342	17.424	29.200	100.088
01-JR-MA-225-197	0.008	45.954	0.000	0.893	0.290	0.192	6.789	0.203	44.239	0.066	0.020	98.654	16.655	29.252	100.323
01-JR-MA-225-198	0.052	46.089	0.011	0.913	0.306	0.237	6.547	0.223	44.090	0.074	0.037	98.579	15.773	29.898	100.159
01-JR-MA-225-199	0.032	45.911	0.000	0.889	0.094	0.190	6.472	0.237	44.637	0.088	0.028	98.578	16.554	29.741	100.237
01-JR-MA-225-200	0.044	46.445	0.007	0.893	0.391	0.307	6.954	0.230	43.285	0.077	0.022	98.655	15.217	29.592	100.180
01-JR-MA-226-009	0.079	46.740	0.000	0.817	0.725	0.236	6.720	0.268	42.848	0.091	0.018	98.542	14.114	30.148	99.956
01-JR-MA-226-011	0.040	45.440	0.000	0.717	0.296	0.263	6.244	0.194	44.358	0.081	0.031	97.664	16.072	29.897	99.274
01-JR-MA-226-012	0.007	45.691	0.000	0.875	0.204	0.226	6.606	0.287	44.058	0.066	0.016	98.036	16.387	29.313	99.678
01-JR-MA-227-003	0.031	44.588	0.049	0.858	0.163	0.253	5.472	0.348	46.898	0.071	0.029	98.760	18.348	30.388	100.598
01-JR-MA-227-004	0.065	43.187	0.027	0.975	0.122	0.214	5.478	0.300	47.555	0.053	0.019	97.995	20.457	29.146	100.045
01-JR-MA-227-005	0.053	44.480	0.000	0.843	0.256	0.295	6.175	0.218	45.445	0.064	0.022	97.851	18.029	29.222	99.657
01-JR-MA-227-006	0.046	45.479	0.009	0.849	0.362	0.159	6.602	0.234	44.524	0.081	0.031	98.376	17.135	29.106	100.093
01-JR-MA-227-007	0.040	47.093	0.000	0.771	0.783	0.242	7.101	0.252	42.123	0.131	0.019	98.555	13.777	29.727	99.935
01-JR-MA-227-008	0.039	45.706	0.002	0.960	0.475	0.174	6.861	0.234	43.751	0.089	0.025	98.316	16.556	28.854	99.975

Sample	SiO2	TiO2	Nb2O5	Al2O3	Cr2O3	V2O5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe2O3	FeO	Total
01-JR-MA-227-010	0.032	47.136	0.000	0.819	0.493	0.209	7.331	0.219	42.604	0.106	0.022	98.971	14.731	29.349	100.447
01-JR-MA-227-011	0.025	45.932	0.000	0.915	0.451	0.211	6.787	0.262	43.769	0.093	0.000	98.445	16.171	29.218	100.065
01-JR-MA-227-012	0.021	46.843	0.008	0.851	0.314	0.251	7.299	0.183	41.898	0.112	0.022	97.802	14.073	29.235	99.212
01-JR-MA-228-001	0.050	45.033	0.000	1.022	0.682	0.286	6.776	0.220	44.226	0.089	0.014	98.398	17.353	28.612	100.137
01-JR-MA-228-002	0.042	46.216	0.000	0.931	0.363	0.246	7.033	0.185	43.451	0.069	0.002	98.536	15.826	29.210	100.124
01-JR-MA-228-003	0.047	46.063	0.017	0.837	0.346	0.208	6.152	0.335	44.850	0.087	0.021	98.963	16.036	30.421	100.570
01-JR-MA-228-004	0.013	44.784	0.000	0.933	0.276	0.301	6.020	0.235	45.655	0.067	0.026	98.310	17.720	29.710	100.085
01-JR-MA-228-005	0.002	43.890	0.050	0.912	0.253	0.261	5.864	0.268	46.323	0.046	0.016	97.885	19.077	29.157	99.796
01-JR-MA-228-006	0.010	45.309	0.000	0.847	0.472	0.260	5.989	0.296	45.135	0.077	0.003	98.398	16.689	30.118	100.070
01-JR-MA-228-007	0.024	44.821	0.037	0.683	0.537	0.230	5.642	0.269	45.702	0.090	0.022	98.057	17.112	30.305	99.771
01-JR-MA-228-008	0.011	45.512	0.002	0.843	0.490	0.249	6.137	0.308	44.555	0.064	0.023	98.194	16.170	30.005	99.814
01-JR-MA-228-009	0.025	43.776	0.000	0.956	0.248	0.274	6.163	0.205	45.996	0.067	0.031	97.741	19.392	28.546	99.684
01-JR-MA-228-010	0.031	44.658	0.044	0.778	0.298	0.296	5.093	0.322	47.330	0.054	0.043	98.947	17.905	31.219	100.741
01-JR-MA-228-011	0.021	46.844	0.000	0.700	0.762	0.287	7.547	0.166	42.070	0.130	0.011	98.538	14.690	28.851	100.010
01-JR-MA-228-012	0.020	46.630	0.000	0.640	0.605	0.277	6.310	0.326	43.276	0.054	0.045	98.183	13.946	30.727	99.580
01-JR-MA-228-013	0.060	45.086	0.000	1.529	0.324	0.311	6.854	0.261	43.832	0.099	0.055	98.411	17.056	28.485	100.120
01-JR-MA-228-014	0.016	44.219	0.029	0.811	0.263	0.230	6.093	0.253	45.995	0.059	0.011	97.979	18.890	28.997	99.872
01-JR-MA-228-015	0.062	46.567	0.028	0.994	0.243	0.238	7.044	0.191	43.015	0.118	0.026	98.526	15.049	29.474	100.034
01-JR-MA-228-016	0.022	44.330	0.000	1.021	0.300	0.293	6.841	0.165	44.844	0.070	0.006	97.892	18.806	27.923	99.776
01-JR-MA-228-017	0.030	44.675	0.000	1.007	0.204	0.237	6.645	0.136	45.146	0.069	0.034	98.183	18.490	28.509	100.036
01-JR-MA-228-019	0.023	44.803	0.104	0.441	0.069	0.083	6.428	0.252	45.240	0.040	0.025	97.508	18.282	28.790	99.340
01-JR-MA-228-020	0.048	46.458	0.000	0.878	0.390	0.281	7.334	0.217	42.443	0.095	0.010	98.154	15.063	28.890	99.663
01-JR-MA-228-021	0.030	43.778	0.035	1.057	0.298	0.307	6.578	0.161	45.937	0.103	0.023	98.307	20.021	27.922	100.313
01-JR-MA-228-022	0.048	45.762	0.000	0.834	0.335	0.242	6.277	0.320	44.428	0.063	0.034	98.343	16.045	29.991	99.951
01-JR-MA-228-023	0.023	45.943	0.000	0.869	0.389	0.225	6.972	0.214	43.613	0.096	0.024	98.368	16.304	28.943	100.001
01-JR-MA-228-024	0.016	44.316	0.054	0.982	0.587	0.261	6.899	0.165	44.698	0.107	0.015	98.100	18.820	27.764	99.986
01-JR-MA-228-025	0.044	44.403	0.030	0.780	0.246	0.308	5.244	0.366	47.007	0.019	0.007	98.454	18.055	30.761	100.263
01-JR-MA-228-026	0.034	43.866	0.018	1.514	0.402	0.214	6.299	0.265	45.338	0.077	0.013	98.040	18.973	28.266	99.941
01-JR-MA-228-027	0.017	45.848	0.041	0.705	0.394	0.213	7.100	0.161	43.431	0.100	0.000	98.010	16.351	28.719	99.648
01-JR-MA-228-028	0.022	46.167	0.000	1.065	0.512	0.248	7.331	0.220	42.616	0.105	0.026	98.312	15.662	28.523	99.881
01-JR-MA-228-029	0.051	46.099	0.001	0.909	0.209	0.212	7.105	0.215	43.579	0.077	0.043	98.500	16.357	28.861	100.139
01-JR-MA-228-030	0.038	44.794	0.000	0.988	0.226	0.267	6.741	0.193	45.100	0.089	0.016	98.452	18.514	28.441	100.307
01-JR-MA-228-031	0.021	44.869	0.013	0.902	0.404	0.289	5.900	0.299	45.365	0.041	0.016	98.119	17.105	29.974	99.833
01-JR-MA-228-032	0.010	44.044	0.044	0.809	0.260	0.199	6.170	0.247	46.352	0.052	0.024	98.211	19.657	28.664	100.181
01-JR-MA-228-033	0.017	45.100	0.044	1.014	0.264	0.249	6.959	0.189	44.316	0.070	0.016	98.238	17.751	28.344	100.016
01-JR-MA-228-034	0.028	44.276	0.000	0.979	0.181	0.261	6.145	0.271	45.786	0.048	0.018	97.993	18.684	28.974	99.865
01-JR-MA-228-035	0.005	44.469	0.000	0.789	0.236	0.334	6.333	0.238	45.627	0.038	0.024	98.143	18.600	28.890	100.007
01-JR-MA-228-036	0.017	44.925	0.000	0.967	0.392	0.291	6.551	0.250	44.754	0.068	0.005	98.220	17.639	28.882	99.987
01-JR-MA-228-037	0.023	46.564	0.006	0.804	0.423	0.256	7.230	0.242	42.928	0.109	0.029	98.614	15.421	29.052	100.159
01-JR-MA-228-038	0.019	45.967	0.009	0.908	0.292	0.269	6.973	0.200	43.767	0.073	0.018	98.495	16.324	29.079	100.131
01-JR-MA-228-039	0.027	45.773	0.000	0.855	0.241	0.321	7.082	0.197	43.963	0.084	0.021	98.564	16.872	28.782	100.254
01-JR-MA-228-040	0.035	43.389	0.000	1.042	0.226	0.220	5.891	0.244	47.142	0.031	0.017	98.237	20.587	28.617	100.300
01-JR-MA-228-042	0.031	43.706	0.030	0.917	0.260	0.289	6.445	0.206	46.254	0.074	0.014	98.226	20.229	28.052	100.253
01-JR-MA-228-043	0.025	46.625	0.000	0.750	0.158	0.232	6.127	0.354	44.121	0.040	0.016	98.448	14.588	30.995	99.910
01-JR-MA-228-044	0.040	45.106	0.062	0.919	0.172	0.217	6.791	0.202	44.876	0.067	0.048	98.500	18.081	28.606	100.312
01-JR-MA-228-045	0.033	45.882	0.000	0.803	0.576	0.263	5.855	0.339	44.896	0.057	0.035	98.739	15.608	30.852	100.303
01-JR-MA-228-046	0.018	45.017	0.016	0.747	0.286	0.274	6.130	0.239	45.141	0.082	0.029	97.979	17.179	29.683	99.700
01-JR-MA-228-047	0.023	44.767	0.000	0.809	0.622	0.291	5.746	0.280	45.388	0.082	0.026	98.034	16.969	30.119	99.734
01-JR-MA-228-048	0.035	45.887	0.000	0.900	0.126	0.252	7.036	0.212	43.475	0.048	0.013	97.984	16.205	28.893	99.608

Sample	SiO_2	TiO_2	Nb_2O_5	Al_2O_3	Cr_2O_3	V_2O_3	MgO	MnO	FeO*	NiO	ZnO	Total	Fe_2O_3	FeO	Total
01-JR-MA-228-049	0.027	45.108	0.050	0.972	0.345	0.227	6.808	0.226	44.555	0.089	0.022	98.429	17.795	28.543	100.212
01-JR-MA-228-050	0.034	45.232	0.062	0.886	0.556	0.279	7.226	0.181	43.438	0.119	0.009	98.022	17.111	28.041	99.736
01-JR-MA-228-051	0.039	45.191	0.000	0.775	0.404	0.260	6.048	0.270	45.044	0.069	0.019	98.119	16.762	29.961	99.798
01-JR-MA-228-052	0.020	46.899	0.021	0.929	0.238	0.189	7.032	0.255	42.582	0.096	0.010	98.271	14.396	29.629	99.713
01-JR-MA-228-053	0.027	45.407	0.000	0.959	0.377	0.321	7.086	0.164	44.063	0.091	0.003	98.498	17.309	28.488	100.232
01-JR-MA-228-054	0.019	47.326	0.053	0.569	0.208	0.111	6.880	0.385	43.019	0.099	0.027	98.696	14.420	30.044	100.141
01-JR-MA-228-055	0.029	46.077	0.072	0.879	0.467	0.286	6.870	0.196	43.572	0.058	0.007	98.513	15.643	29.496	100.080
01-JR-MA-228-056	0.031	45.532	0.000	0.908	0.466	0.245	6.641	0.234	43.740	0.086	0.033	97.916	16.175	29.186	99.537
01-JR-MA-228-057	0.017	45.136	0.003	0.818	0.357	0.214	6.530	0.226	44.466	0.064	0.044	97.875	17.205	28.984	99.599
01-JR-MA-228-058	0.014	45.382	0.037	0.830	0.447	0.235	6.597	0.226	43.833	0.084	0.006	97.691	16.299	29.167	99.324
01-JR-MA-228-059	0.020	47.475	0.028	0.997	0.198	0.206	7.306	0.213	41.661	0.092	0.014	98.210	13.253	29.736	99.538
01-JR-MA-228-060	0.047	45.304	0.008	0.883	0.307	0.312	6.513	0.246	43.933	0.061	0.009	97.623	16.178	29.375	99.244
01-JR-MA-228-061	0.026	45.245	0.000	0.892	0.238	0.259	6.924	0.214	43.688	0.080	0.019	97.585	16.904	28.478	99.279
01-JR-MA-228-062	0.006	44.842	0.000	0.981	0.205	0.218	6.604	0.154	44.439	0.055	0.024	97.528	17.517	28.677	99.283
01-JR-MA-228-063	0.044	45.108	0.000	0.955	0.652	0.335	6.968	0.175	43.068	0.097	0.015	97.417	16.252	28.445	99.045
01-JR-MA-228-064	0.023	45.808	0.000	0.962	0.423	0.247	7.308	0.186	42.060	0.142	0.000	97.159	15.333	28.263	98.695
01-JR-MA-228-065	0.038	46.124	0.021	0.823	0.374	0.177	7.059	0.188	43.311	0.080	0.018	98.213	15.946	28.962	99.811
01-JR-MA-228-067	0.015	45.795	0.000	0.782	0.463	0.266	6.168	0.333	44.358	0.043	0.030	98.253	15.709	30.223	99.827
01-JR-MA-228-068	0.019	44.742	0.020	1.076	0.191	0.302	7.078	0.168	44.317	0.138	0.010	98.061	18.322	27.831	99.897
01-JR-MA-228-069	0.006	45.388	0.024	0.544	0.520	0.299	6.585	0.170	44.780	0.066	0.009	98.391	17.156	29.343	100.110
01-JR-MA-228-071	0.051	45.298	0.000	1.538	0.208	0.225	6.544	0.338	44.061	0.043	0.054	98.360	16.674	29.058	100.031
01-JR-MA-228-072	0.004	45.111	0.007	0.920	0.305	0.272	6.602	0.265	44.345	0.104	0.015	97.950	17.207	28.862	99.674
01-JR-MA-228-073	0.018	47.224	0.022	0.940	0.289	0.193	7.672	0.203	41.771	0.094	0.022	98.448	14.383	28.829	99.889
01-JR-MA-228-074	0.050	45.246	0.027	0.790	0.533	0.216	5.667	0.369	45.184	0.053	0.046	98.181	16.259	30.554	99.810
01-JR-MA-228-075	0.029	45.591	0.033	0.753	0.454	0.251	6.090	0.243	44.925	0.088	0.000	98.457	16.274	30.282	100.088
01-JR-MA-228-077	0.000	44.544	0.000	0.843	0.215	0.266	5.700	0.243	46.315	0.085	0.049	98.260	18.190	29.948	100.082
01-JR-MA-228-078	0.029	44.092	0.000	0.654	0.300	0.241	5.993	0.212	46.002	0.055	0.012	97.590	18.776	29.107	99.471
01-JR-MA-228-079	0.017	43.288	0.051	1.096	0.144	0.263	5.871	0.184	46.671	0.067	0.018	97.670	19.984	28.689	99.672
01-JR-MA-228-080	0.034	47.837	0.031	0.785	0.777	0.181	7.343	0.201	41.828	0.107	0.013	99.137	13.173	29.974	100.457
01-JR-MA-228-081	0.036	45.432	0.000	0.602	0.225	0.301	6.136	0.214	45.531	0.083	0.009	98.569	17.111	30.134	100.283
01-JR-MA-228-082	0.023	47.184	0.089	0.728	0.716	0.192	6.579	0.347	42.698	0.073	0.033	98.662	13.353	30.683	100.000
01-JR-MA-228-083	0.045	45.885	0.018	0.720	0.384	0.204	5.639	0.384	44.515	0.044	0.027	97.865	14.849	31.154	99.353
01-JR-MA-228-084	0.027	46.468	0.002	0.842	0.541	0.243	7.345	0.235	43.109	0.115	0.007	98.934	15.945	28.761	100.532
01-JR-MA-228-085	0.021	45.563	0.000	0.908	0.534	0.246	6.987	0.179	44.157	0.101	0.025	98.721	17.250	28.635	100.449
01-JR-MA-228-086	0.035	46.048	0.000	0.981	0.192	0.251	6.852	0.208	43.883	0.070	0.033	98.553	16.174	29.330	100.173
01-JR-MA-228-087	0.069	46.084	0.051	0.826	0.504	0.261	6.171	0.378	44.302	0.050	0.023	98.719	15.291	30.543	100.251
01-JR-MA-228-088	0.020	45.651	0.031	0.931	0.477	0.236	6.740	0.235	43.781	0.078	0.006	98.186	16.257	29.153	99.815
01-JR-MA-228-089	0.016	46.116	0.000	0.965	0.542	0.294	7.272	0.159	42.530	0.103	0.001	97.998	15.332	28.734	99.534
01-JR-MA-228-090	0.034	46.946	0.000	0.316	0.062	0.172	7.267	0.300	43.279	0.088	0.046	98.510	15.703	29.150	100.083
01-JR-MA-228-091	0.022	46.716	0.007	0.978	0.502	0.207	7.399	0.218	42.208	0.123	0.006	98.386	14.856	28.841	99.874
01-JR-MA-228-092	0.043	47.377	0.015	0.856	0.771	0.247	6.467	0.373	42.932	0.067	0.039	99.187	13.193	31.061	100.509
01-JR-MA-228-093	0.023	46.132	0.000	0.951	0.404	0.276	7.134	0.198	43.016	0.104	0.023	98.261	15.672	28.914	99.831
01-JR-MA-228-094	0.040	45.171	0.000	0.770	0.327	0.259	5.616	0.347	46.687	0.035	0.023	99.275	17.807	30.664	101.059
01-JR-MA-228-095	0.016	46.528	0.000	0.757	0.458	0.230	6.422	0.322	43.963	0.053	0.022	98.771	15.093	30.382	100.283
01-JR-MA-228-096	0.036	46.295	0.000	0.815	0.452	0.247	6.705	0.251	43.488	0.056	0.020	98.365	15.223	29.790	99.890
01-JR-MA-228-097	0.020	45.478	0.000	0.870	0.235	0.273	6.764	0.219	44.720	0.060	0.024	98.663	17.474	28.997	100.414
01-JR-MA-228-098	0.023	45.051	0.025	1.028	0.299	0.356	6.800	0.178	44.533	0.073	0.021	98.387	17.549	28.742	100.145
01-JR-MA-228-099	0.032	47.338	0.091	0.370	0.108	0.085	7.129	0.312	42.994	0.061	0.026	98.546	14.732	29.738	100.022
01-JR-MA-228-100	0.047	45.407	0.026	0.830	0.423	0.270	6.308	0.267	44.646	0.052	0.027	98.303	16.546	29.758	99.961

Sample	SiO2	TiO2	Nb2O5	Al2O3	Cr2O3	V2O5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe2O3	FeO	Total
01-JR-MA-228-101	0.040	45.494	0.000	0.893	0.332	0.224	6.893	0.162	44.320	0.093	0.022	98.473	17.297	28.756	100.206
01-JR-MA-228-102	0.031	45.932	0.003	0.785	0.279	0.316	6.706	0.272	44.041	0.062	0.021	98.448	16.115	29.540	100.063
01-JR-MA-228-103	0.036	45.301	0.000	0.867	0.224	0.264	6.703	0.176	44.688	0.058	0.000	98.317	17.414	29.018	100.062
01-JR-MA-228-104	0.002	47.612	0.000	0.886	0.286	0.184	7.706	0.215	41.824	0.072	0.024	98.811	14.176	29.068	100.231
01-JR-MA-228-105	0.010	45.833	0.037	0.789	0.336	0.288	6.997	0.178	44.145	0.113	0.026	98.752	16.896	28.942	100.445
01-JR-MA-228-106	0.031	45.929	0.058	0.701	0.697	0.287	6.178	0.322	44.479	0.081	0.038	98.801	15.638	30.408	100.368
01-JR-MA-228-107	0.030	45.329	0.000	1.015	0.554	0.289	6.949	0.190	43.553	0.067	0.039	98.015	16.640	28.580	99.682
01-JR-MA-228-108	0.031	46.123	0.018	0.826	0.316	0.240	6.973	0.216	44.058	0.091	0.019	98.911	16.554	29.163	100.570
01-JR-MA-228-109	0.043	47.203	0.016	0.845	0.415	0.260	7.652	0.190	42.150	0.113	0.021	98.908	14.646	28.971	100.375
01-JR-MA-228-110	0.036	46.669	0.022	0.880	0.144	0.230	7.407	0.231	43.223	0.082	0.008	98.932	15.942	28.878	100.529
01-JR-MA-228-111	0.018	45.295	0.000	0.770	0.528	0.207	5.770	0.336	45.543	0.045	0.001	98.513	16.814	30.413	100.198
01-JR-MA-228-112	0.034	45.481	0.007	0.843	0.583	0.246	6.905	0.205	44.415	0.076	0.021	98.816	17.430	28.732	100.562
01-JR-MA-228-113	0.035	47.014	0.006	0.644	0.484	0.186	7.169	0.195	42.506	0.105	0.005	98.349	14.408	29.541	99.793
01-JR-MA-228-114	0.036	45.437	0.024	0.773	0.353	0.254	5.876	0.334	45.738	0.054	0.013	98.892	16.983	30.457	100.594
01-JR-MA-228-116	0.036	46.131	0.045	2.158	0.492	0.181	6.814	0.327	42.935	0.071	0.074	99.264	15.205	29.254	100.787
01-JR-MA-228-117	0.023	46.685	0.023	0.826	0.495	0.274	7.111	0.204	42.902	0.087	0.004	98.634	14.893	29.501	100.126
01-JR-MA-228-118	0.038	45.615	0.000	1.938	0.202	0.239	7.432	0.170	43.399	0.078	0.043	99.154	17.210	27.913	100.878
01-JR-MA-228-119	0.020	44.883	0.000	1.707	0.162	0.278	6.830	0.205	44.514	0.047	0.038	98.684	17.945	28.367	100.482
01-JR-MA-228-120	0.054	44.751	0.000	1.020	0.337	0.292	6.856	0.193	44.857	0.066	0.035	98.463	18.446	28.259	100.311
01-JR-MA-228-121	0.029	45.918	0.022	0.926	0.315	0.252	7.246	0.172	43.754	0.114	0.014	98.762	16.908	28.540	100.456
01-JR-MA-228-122	0.031	45.854	0.038	0.804	0.272	0.235	7.215	0.164	44.187	0.092	0.024	98.916	17.377	28.551	100.657
01-JR-MA-228-123	0.046	45.218	0.008	0.605	0.137	0.217	6.446	0.190	45.493	0.052	0.026	98.440	17.975	29.319	100.241
01-JR-MA-228-124	0.037	44.261	0.049	0.866	0.227	0.264	6.354	0.181	45.975	0.052	0.008	98.274	19.140	28.753	100.192
01-JR-MA-228-125	0.016	45.539	0.062	0.916	0.471	0.269	6.964	0.202	43.834	0.080	0.016	98.369	16.756	28.757	100.048
01-JR-MA-231-002	0.036	45.431	0.000	0.932	0.275	0.236	6.852	0.225	43.414	0.074	0.031	97.506	16.316	28.733	99.141
01-JR-MA-231-003	0.000	46.702	0.019	0.865	0.360	0.245	7.354	0.208	42.139	0.098	0.007	97.997	14.615	28.988	99.461
01-JR-MA-231-004	0.029	47.460	0.000	0.638	0.580	0.223	6.665	0.400	42.134	0.084	0.041	98.254	12.745	30.666	99.531
01-JR-MA-231-005	0.015	45.989	0.000	0.907	0.295	0.206	6.589	0.328	43.798	0.062	0.000	98.189	15.817	29.566	99.774
01-JR-MA-237-010	0.008	47.809	0.041	0.119	0.576	0.211	6.044	0.404	43.655	0.068	0.034	98.969	12.837	32.105	100.255
01-JR-MA-238-008	0.017	44.408	0.039	0.508	0.104	0.176	6.360	0.282	45.920	0.066	0.022	97.902	19.279	28.572	99.834
01-JR-MA-238-010	0.028	45.373	0.038	0.614	0.285	0.282	5.520	0.337	45.857	0.041	0.015	98.390	16.410	31.091	100.034
01-JR-MA-238-011	0.041	46.783	0.059	1.018	0.284	0.227	7.028	0.228	42.555	0.104	0.016	98.343	14.317	29.672	99.777
01-JR-MA-238-012	0.047	41.899	0.058	0.895	0.086	0.256	5.672	0.176	48.396	0.042	0.027	97.554	22.833	27.851	99.842
01-JR-MA-238-013	0.008	44.651	0.005	0.667	0.489	0.282	6.119	0.235	45.593	0.046	0.009	98.104	17.975	29.419	99.905
01-JR-MA-238-014	0.013	41.107	0.038	1.267	0.063	0.284	5.535	0.183	48.943	0.011	0.032	97.476	23.960	27.383	99.877
01-JR-MA-238-015	0.055	44.574	0.000	0.660	0.125	0.275	5.292	0.368	46.676	0.035	0.016	98.076	17.719	30.733	99.851
01-JR-MA-238-016	0.028	46.868	0.083	0.938	0.190	0.195	7.184	0.219	41.894	0.078	0.030	97.707	13.827	29.452	99.092
01-JR-MA-238-017	0.028	45.175	0.002	0.893	0.076	0.223	6.309	0.282	44.412	0.042	0.049	97.491	16.684	29.400	99.163
01-JR-MA-238-018	0.015	45.762	0.000	0.905	0.242	0.203	6.885	0.219	43.893	0.106	0.011	98.241	16.676	28.888	99.912
01-JR-MA-245-008	0.013	49.985	0.316	0.176	1.035	0.419	9.292	0.336	37.284	0.059	0.016	98.931	9.208	28.999	99.854
01-JR-MA-245-009	0.021	46.172	0.251	0.185	2.377	0.612	8.058	0.275	40.867	0.059	0.017	98.894	14.217	28.074	100.318
01-JR-MA-246-012	0.080	53.512	0.086	0.320	0.671	0.402	11.702	0.294	32.511	0.076	0.014	99.668	5.337	27.708	100.203
01-JR-MA-246-014	0.078	49.013	0.250	0.114	1.520	0.449	8.569	0.336	38.925	0.053	0.000	99.307	10.489	29.487	100.358
01-JR-MA-246-022	0.012	49.800	0.138	0.184	0.745	0.465	8.928	0.325	38.088	0.034	0.020	98.739	9.665	29.392	99.707
01-JR-MA-246-023	0.037	49.489	0.155	0.204	0.762	0.512	8.730	0.265	38.591	0.027	0.017	98.789	9.928	29.658	99.784
01-JR-MA-246-024	0.023	53.558	0.098	0.301	0.653	0.419	11.620	0.321	32.764	0.052	0.019	99.828	5.451	27.859	100.374
01-JR-MA-247-003	0.029	52.117	0.101	0.261	1.137	0.427	10.359	0.303	34.989	0.061	0.005	99.789	6.817	28.855	100.472
01-JR-MA-249-003	0.049	49.846	0.061	0.310	0.622	0.303	8.646	0.293	38.600	0.029	0.011	98.770	9.907	29.686	99.763
01-JR-MA-250-015	0.034	51.329	0.189	0.211	0.709	0.392	9.744	0.298	36.513	0.049	0.019	99.487	8.025	29.292	100.291

Sample	SiO_2	TiO_2	Nb_2O_5	Al_2O_3	Cr_2O_3	V_2O_3	MgO	MnO	FeO*	NiO	ZnO	Total	Fe_2O_3	FeO	Total
01-JR-MA-250-030	0.032	50.255	0.188	0.315	4.340	0.378	11.292	0.317	32.130	0.166	0.018	99.431	7.466	25.412	100.179
01-JR-MA-250-031	0.053	51.881	0.024	0.508	1.674	0.364	10.844	0.274	33.660	0.091	0.019	99.392	6.721	27.613	100.065
01-JR-MA-250-037	0.031	51.942	0.121	0.256	0.796	0.401	10.333	0.334	35.283	0.034	0.000	99.531	7.287	28.726	100.261
01-JR-MA-252-001	0.018	44.457	0.000	0.847	0.505	0.252	5.691	0.300	45.882	0.028	0.029	98.009	17.762	29.900	99.789
01-JR-MA-253-026	0.075	52.462	0.084	0.496	0.182	0.328	10.749	0.268	34.884	0.054	0.008	99.590	7.217	28.390	100.313
01-JR-MA-253-057	0.046	45.499	0.075	0.265	0.353	0.481	6.374	0.247	44.736	0.028	0.023	98.127	16.204	30.155	99.751
01-JR-MA-253-058	0.043	49.968	0.025	0.512	0.190	0.395	9.580	0.237	38.306	0.034	0.020	99.310	11.149	28.274	100.427
01-JR-MA-253-059	0.014	46.294	0.123	0.278	0.306	0.435	6.544	0.242	43.826	0.015	0.020	98.097	14.778	30.528	99.578
01-JR-MA-253-060	0.007	49.868	0.067	0.378	0.526	0.431	8.620	0.274	38.889	0.035	0.018	99.113	9.970	29.918	100.112
01-JR-MA-253-061	0.030	47.902	0.257	0.408	1.822	0.597	9.715	0.212	37.814	0.067	0.011	98.835	12.316	26.732	100.069
01-JR-MA-253-062	0.033	52.655	0.087	0.425	0.287	0.323	11.093	0.275	34.584	0.026	0.010	99.798	7.413	27.914	100.541
01-JR-MA-253-063	0.041	48.191	0.090	0.332	0.400	0.400	7.684	0.248	40.868	0.036	0.023	98.313	11.950	30.115	99.510
01-JR-MA-253-064	0.046	51.971	0.115	0.476	0.145	0.368	10.528	0.271	35.187	0.026	0.009	99.142	7.512	28.427	99.895
01-JR-MA-253-065	0.021	48.561	0.089	0.389	0.633	0.339	8.020	0.279	40.275	0.031	0.003	98.640	11.732	29.719	99.815
01-JR-MA-253-066	0.039	48.444	0.191	0.151	0.775	0.372	7.558	0.311	41.013	0.030	0.020	98.904	11.601	30.574	100.066
01-JR-MA-253-067	0.014	49.688	0.054	0.622	0.066	0.236	8.891	0.199	38.842	0.036	0.001	98.649	10.883	29.049	99.739
01-JR-MA-253-075	0.016	50.209	0.208	0.229	1.063	0.579	9.560	0.310	37.173	0.046	0.008	99.401	9.185	28.908	100.321
01-JR-MA-253-076	0.020	48.068	0.093	0.302	0.377	0.401	7.169	0.263	42.269	0.021	0.000	98.983	12.611	30.921	100.247
01-JR-MA-253-077	0.053	50.820	0.195	0.212	0.672	0.439	9.181	0.317	38.120	0.042	0.035	100.086	9.119	29.915	101.000
01-JR-MA-253-078	0.038	47.495	0.098	0.285	0.335	0.445	6.926	0.293	42.873	0.030	0.019	98.837	13.329	30.880	100.172
01-JR-MA-253-079	0.030	54.493	0.209	0.230	0.355	0.344	11.814	0.299	32.230	0.021	0.018	100.043	4.238	28.417	100.468
01-JR-MA-253-080	0.055	51.662	0.234	0.336	0.889	0.486	10.184	0.286	35.319	0.052	0.007	99.510	6.967	29.050	100.208
01-JR-MA-253-081	0.031	51.307	0.127	0.239	0.728	0.473	10.050	0.274	36.213	0.042	0.011	99.495	8.213	28.823	100.318
01-JR-MA-253-082	0.025	52.039	0.140	0.392	0.816	0.488	10.678	0.301	34.807	0.028	0.004	99.718	7.137	28.385	100.433
01-JR-MA-253-083	0.036	51.203	0.141	0.340	1.428	0.435	10.367	0.260	35.058	0.071	0.025	99.364	7.733	28.099	100.139
01-JR-MA-253-084	0.037	53.221	0.133	0.486	1.056	0.368	11.933	0.290	32.344	0.092	0.000	99.960	5.959	26.982	100.557
01-JR-MA-253-085	0.015	50.293	0.045	0.555	0.144	0.396	8.756	0.239	38.367	0.053	0.013	98.876	9.287	30.011	99.806
01-JR-MA-253-086	0.022	54.047	0.189	0.324	1.364	0.489	12.523	0.270	30.415	0.095	0.002	99.740	3.881	26.922	100.129
01-JR-MA-253-087	0.031	51.710	0.224	0.251	0.857	0.429	10.161	0.280	35.528	0.054	0.019	99.544	7.257	28.998	100.271
01-JR-MA-254-022	0.037	50.917	0.193	0.227	0.905	0.514	9.434	0.280	36.864	0.054	0.007	99.432	7.963	29.699	100.230
01-JR-MA-254-028	0.046	51.579	0.183	0.284	0.816	0.454	10.163	0.300	35.590	0.043	0.001	99.459	7.439	28.896	100.204
01-JR-MA-255-013	0.044	51.649	0.105	0.280	0.715	0.516	10.223	0.274	35.412	0.045	0.014	99.277	7.263	28.876	100.005
01-JR-MA-255-014	0.040	51.705	0.138	0.224	0.839	0.411	10.072	0.338	35.793	0.032	0.004	99.596	7.530	29.017	100.350
01-JR-SG-001-154	0.027	55.020	0.113	0.482	2.394	0.214	13.872	0.253	27.058	0.173	0.022	99.628	2.501	24.807	99.879
01-JR-SG-001-155	0.040	54.435	0.183	0.294	0.460	0.334	11.818	0.274	31.792	0.054	0.019	99.703	3.861	28.318	100.090
01-JR-SG-001-156	0.026	52.208	0.443	0.191	0.321	0.413	10.673	0.258	34.986	0.026	0.002	99.547	6.871	28.803	100.235
01-JR-SG-001-157	0.039	53.990	0.084	0.281	0.438	0.292	11.725	0.271	32.319	0.053	0.024	99.516	4.901	27.909	100.007
01-JR-SG-001-168	0.035	55.427	0.114	0.444	1.035	0.328	13.684	0.259	28.937	0.090	0.016	100.369	3.511	25.778	100.721
01-JR-SG-001-170	0.046	54.277	0.243	0.260	0.335	0.362	12.109	0.325	32.072	0.047	0.004	100.080	4.812	27.742	100.562
01-JR-SG-001-171	0.020	54.915	0.138	0.349	0.568	0.367	12.611	0.274	31.140	0.055	0.009	100.446	4.241	27.324	100.871
01-JR-SG-001-172	0.013	54.520	0.136	0.373	0.876	0.284	12.939	0.239	30.517	0.094	0.000	99.991	4.744	26.249	100.466
01-JR-SG-001-175	0.033	53.315	0.320	0.243	0.399	0.338	11.345	0.311	33.569	0.054	0.030	99.957	5.908	28.253	100.549
01-JR-SG-001-176	0.017	47.347	0.323	0.194	3.246	0.453	8.720	0.271	38.352	0.134	0.008	99.065	11.824	27.713	100.250
01-JR-SG-001-177	0.053	53.972	0.172	0.325	0.800	0.269	12.378	0.284	31.436	0.055	0.005	99.749	5.145	26.806	100.265
01-JR-SG-001-178	0.050	53.923	0.071	0.626	2.314	0.331	13.315	0.256	28.949	0.121	0.006	99.962	4.343	25.042	100.397
01-JR-SG-001-179	0.035	54.941	0.218	0.306	0.467	0.294	12.560	0.309	30.926	0.046	0.000	100.102	3.909	27.409	100.494
01-JR-SG-001-180	0.042	55.650	0.112	0.635	0.454	0.266	14.596	0.402	27.489	0.094	0.010	99.750	3.746	24.118	100.125
01-JR-SG-001-181	0.036	53.546	0.068	0.532	3.846	0.298	13.781	0.260	27.483	0.156	0.030	100.036	4.159	23.741	100.453
01-JR-SG-001-182	0.046	54.513	0.102	0.254	0.357	0.336	12.727	0.400	30.977	0.031	0.021	99.764	4.882	26.584	100.253

Sample	SiO_2	TiO_2	Nb_2O_5	Al_2O_3	Cr_2O_3	V_2O_5	MgO	MnO	FeO^*	NiO	ZnO	Total	Fe_2O_3	FeO	Total
01-JR-SG-001-183	0.011	52.127	0.433	0.193	0.350	0.391	10.891	0.292	34.852	0.048	0.013	99.601	7.378	28.213	100.340
01-JR-SG-001-184	0.016	53.605	0.121	0.400	0.678	0.269	11.572	0.258	32.597	0.070	0.009	99.595	5.307	27.821	100.127
01-JR-SG-001-185	0.031	54.621	0.180	0.222	0.330	0.346	12.912	0.314	30.487	0.049	0.017	99.509	4.423	26.507	99.952
01-JR-SG-001-186	0.021	54.607	0.251	0.241	0.312	0.299	12.304	0.295	31.668	0.047	0.000	100.045	4.516	27.605	100.497
01-JR-SG-001-187	0.049	54.916	0.098	0.462	1.488	0.326	14.183	0.312	28.122	0.126	0.019	100.101	4.209	24.335	100.523
01-JR-SG-001-188	0.043	53.718	0.176	0.256	0.554	0.328	11.689	0.266	32.583	0.047	0.012	99.672	5.192	27.911	100.192
01-JR-SG-001-189	0.022	54.944	0.234	0.279	0.492	0.292	12.477	0.319	30.436	0.053	0.020	99.568	3.237	27.523	99.892
01-JR-SG-001-190	0.035	54.690	0.282	0.265	0.410	0.372	12.279	0.321	31.302	0.038	0.000	99.994	3.812	27.872	100.376
01-JR-SG-001-191	0.030	55.148	0.125	0.301	0.496	0.299	12.729	0.299	30.581	0.052	0.014	100.074	3.772	27.187	100.452
01-JR-SG-001-192	0.046	54.348	0.084	0.287	0.502	0.237	12.097	0.314	32.072	0.059	0.031	100.077	5.155	27.434	100.593
01-JR-SG-001-193	0.034	53.769	0.081	0.507	1.434	0.293	12.627	0.274	30.675	0.103	0.014	99.811	5.137	26.053	100.326
01-JR-SG-001-194	0.011	49.540	0.196	0.221	1.328	0.361	8.252	0.312	39.067	0.045	0.017	99.350	9.782	30.265	100.330
01-JR-SG-001-195	0.037	54.439	0.138	0.215	0.373	0.359	11.819	0.291	32.422	0.023	0.011	100.127	4.551	28.327	100.583
01-JR-SG-001-196	0.039	53.651	0.098	0.389	1.475	0.243	12.306	0.285	31.438	0.090	0.020	100.034	5.532	26.460	100.588
01-JR-SG-001-197	0.034	54.509	0.130	0.507	1.792	0.231	13.473	0.274	28.826	0.149	0.026	99.951	4.129	25.111	100.365
01-JR-SG-001-198	0.017	54.405	0.110	0.272	0.509	0.269	11.967	0.324	32.030	0.065	0.000	99.968	4.732	27.772	100.442
01-JR-SG-001-199	0.036	54.167	0.299	0.361	0.850	0.455	13.587	0.344	29.837	0.091	0.005	100.032	5.217	25.143	100.555
01-JR-SG-001-200	0.037	54.424	0.082	0.435	0.527	0.245	12.760	0.283	30.822	0.080	0.003	99.698	4.963	26.356	100.195
01-JR-SG-001-201	0.034	51.900	0.325	0.211	0.402	0.373	9.999	0.278	36.236	0.017	0.030	99.805	7.475	29.510	100.554
01-JR-SG-001-202	0.041	55.072	0.107	0.428	0.481	0.338	13.031	0.268	30.002	0.089	0.031	99.888	3.762	26.617	100.265
01-JR-SG-001-203	0.023	52.723	0.227	0.235	0.412	0.369	10.753	0.319	34.451	0.037	0.013	99.562	6.352	28.735	100.198
01-JR-SG-001-204	0.057	53.862	0.083	0.613	2.637	0.254	13.060	0.253	28.732	0.169	0.011	99.731	3.822	25.293	100.114
01-JR-SG-001-205	0.032	54.849	0.149	0.544	1.075	0.254	13.724	0.249	29.158	0.103	0.012	100.149	4.504	25.106	100.600
01-JR-SG-001-206	0.026	52.004	0.098	0.396	0.254	0.410	10.512	0.288	35.600	0.042	0.014	99.644	7.921	28.473	100.438
01-JR-SG-001-207	0.026	54.050	0.030	0.580	0.676	0.245	12.274	0.309	31.590	0.118	0.012	99.910	5.384	26.746	100.449
01-JR-SG-001-208	0.043	55.561	0.183	0.525	1.211	0.332	14.652	0.248	27.178	0.106	0.027	100.066	3.254	24.250	100.392
01-JR-SG-001-209	0.047	54.100	0.124	0.527	2.142	0.216	13.701	0.279	28.356	0.183	0.000	99.675	4.500	24.307	100.126
01-JR-SG-001-210	0.047	54.131	0.119	0.302	0.440	0.297	12.118	0.257	31.666	0.060	0.011	99.448	4.731	27.409	99.922
01-JR-SG-001-211	0.043	55.487	0.121	0.434	0.577	0.413	13.701	0.264	28.849	0.079	0.016	99.984	3.212	25.959	100.306
01-JR-SG-001-212	0.019	55.754	0.078	0.435	0.712	0.296	14.646	0.264	27.536	0.081	0.021	99.842	3.654	24.249	100.208
01-JR-SG-001-213	0.025	54.758	0.069	0.408	0.904	0.269	13.138	0.257	29.547	0.091	0.015	99.481	3.945	25.998	99.876
01-JR-SG-001-214	0.024	54.233	0.164	0.298	0.452	0.255	11.978	0.283	31.897	0.056	0.021	99.661	4.693	27.674	100.131
01-JR-SG-001-215	0.023	50.503	0.198	0.319	0.990	0.333	9.324	0.275	36.866	0.039	0.023	98.893	8.485	29.231	99.743
01-JR-SG-001-216	0.043	49.251	0.204	0.173	1.087	0.320	8.074	0.316	39.498	0.050	0.024	99.040	10.234	30.289	100.065
01-JR-SG-001-217	0.026	51.376	0.212	0.173	1.342	0.330	10.350	0.255	35.106	0.049	0.022	99.241	7.660	28.213	100.009
01-JR-SG-001-218	0.030	46.395	0.338	0.107	4.724	0.423	8.661	0.334	37.594	0.116	0.018	98.740	11.895	26.891	99.932
01-JR-SG-001-219	0.022	49.375	0.128	0.198	1.258	0.349	8.221	0.294	39.149	0.036	0.023	99.053	10.041	30.114	100.059
01-JR-SG-001-220	0.038	54.654	0.085	0.522	1.337	0.318	13.837	0.317	28.613	0.084	0.017	99.822	4.334	24.713	100.256
01-JR-SG-001-221	0.033	53.932	0.249	0.530	0.690	0.361	13.392	0.374	29.949	0.087	0.012	99.609	5.456	25.040	100.156
01-JR-SG-001-222	0.019	52.770	0.279	0.179	0.307	0.396	11.012	0.319	34.056	0.012	0.018	99.367	6.253	28.430	99.993
01-JR-SG-001-223	0.049	53.905	0.038	0.503	0.255	0.266	12.427	0.302	31.372	0.110	0.010	99.237	5.494	26.429	99.787
01-JR-SG-001-224	0.035	51.829	0.352	0.215	0.459	0.333	10.256	0.284	35.288	0.032	0.037	99.120	7.068	28.929	99.828
01-JR-SG-001-225	0.021	48.089	0.351	0.094	2.904	0.306	8.525	0.339	38.039	0.096	0.026	98.790	10.621	28.482	99.854
01-JR-SG-001-226	0.032	54.629	0.115	0.450	0.956	0.358	13.403	0.274	29.106	0.078	0.000	99.401	3.878	25.617	99.790
01-JR-SG-001-227	0.044	53.494	0.088	0.571	3.047	0.282	13.710	0.224	28.116	0.192	0.010	99.778	4.745	23.846	100.253
01-JR-SG-001-228	0.043	50.754	0.364	0.219	0.833	0.447	10.787	0.273	35.190	0.051	0.018	98.979	8.849	27.228	99.866
01-JR-SG-001-229	0.052	54.510	0.139	0.569	2.233	0.290	14.179	0.263	27.119	0.140	0.008	99.502	3.451	24.014	99.848
01-JR-SG-001-230	0.053	47.449	0.146	0.127	0.814	0.414	7.097	0.330	41.789	0.030	0.007	98.256	12.515	30.528	99.510
01-JR-SG-001-231	0.016	54.433	0.180	0.342	0.509	0.315	12.855	0.270	30.576	0.062	0.005	99.563	4.624	26.415	100.026

Sample	SiO2	TiO2	Nb2O5	Al2O3	Cr2O3	V2O3	MgO	MnO	FeO*	NiO	ZnO	Total	Fe2O3	FeO	Total
01-JR-SG-001-232	0.034	52.785	0.287	0.227	0.452	0.300	11.256	0.325	33.752	0.043	0.036	99.497	6.580	27.831	100.156
01-JR-SG-001-234	0.033	54.367	0.137	0.483	0.322	0.418	14.627	0.453	28.544	0.067	0.010	99.461	6.006	23.140	100.063
01-JR-SG-001-235	0.041	53.451	0.120	0.336	0.527	0.271	11.869	0.284	32.586	0.057	0.012	99.554	6.020	27.169	100.157
01-JR-SG-001-236	0.051	49.107	0.097	0.197	1.321	0.339	8.332	0.299	39.306	0.035	0.031	99.115	10.732	29.649	100.190
01-JR-SG-001-237	0.024	52.793	0.255	0.281	0.338	0.398	12.684	0.351	31.941	0.032	0.014	99.111	7.263	25.406	99.839
01-JR-SG-001-238	0.047	54.785	0.042	0.449	0.605	0.242	14.010	0.362	28.904	0.079	0.016	99.541	5.087	24.327	100.051
01-JR-SG-001-239	0.006	53.159	0.114	0.303	0.898	0.236	11.989	0.275	31.879	0.076	0.017	98.952	5.894	26.576	99.543
01-JR-SG-001-240	0.027	52.820	0.110	0.507	0.242	0.306	12.076	0.251	32.789	0.083	0.009	99.220	7.243	26.272	99.946
01-JR-SG-001-241	0.029	54.410	0.141	0.312	0.596	0.276	13.211	0.300	30.131	0.046	0.032	99.484	4.999	25.633	99.985
01-JR-SG-001-242	0.051	49.414	0.215	0.118	0.438	0.352	8.664	0.295	38.890	0.018	0.013	98.468	10.415	29.518	99.512
01-JR-SG-001-243	0.040	50.869	0.294	0.172	0.513	0.402	11.896	0.425	34.291	0.034	0.027	98.963	10.260	25.059	99.991
01-JR-SG-001-244	0.024	51.881	0.323	0.371	0.379	0.434	12.348	0.275	33.083	0.053	0.010	99.181	8.566	25.375	100.039
01-JR-SG-001-245	0.000	54.698	0.125	0.408	0.748	0.329	13.292	0.328	29.337	0.066	0.015	99.346	3.990	25.747	99.746
01-JR-SG-001-246	0.050	54.431	0.077	0.569	2.420	0.293	14.249	0.254	27.389	0.180	0.000	99.912	4.065	23.731	100.319
01-JR-SG-001-247	0.060	55.861	0.166	0.409	0.805	0.255	14.415	0.282	27.387	0.091	0.015	99.746	2.860	24.813	100.033
01-JR-SG-001-248	0.000	49.226	0.366	0.198	0.967	0.382	9.794	0.281	37.009	0.047	0.009	98.279	10.595	27.475	99.341
01-JR-SG-001-249	0.031	53.779	0.158	0.435	0.933	0.259	12.559	0.248	31.098	0.080	0.019	99.599	5.385	26.253	100.138
01-JR-SG-001-250	0.020	50.771	0.369	0.208	0.396	0.394	10.195	0.297	36.153	0.010	0.017	98.830	8.829	28.208	99.715
01-JR-SG-001-251	0.031	53.747	0.119	0.572	2.363	0.286	13.371	0.249	28.440	0.162	0.014	99.354	4.154	24.702	99.770
01-JR-SG-001-252	0.027	55.519	0.071	0.530	1.234	0.317	14.629	0.271	26.748	0.113	0.039	99.498	3.000	24.049	99.799
01-JR-SG-001-253	0.029	53.842	0.161	0.326	0.774	0.263	12.726	0.248	31.016	0.064	0.018	99.467	5.535	26.035	100.022
01-JR-SG-001-254	0.037	54.666	0.143	0.430	1.149	0.306	13.360	0.253	29.325	0.088	0.014	99.771	4.051	25.680	100.177
01-JR-SG-001-255	0.038	49.276	0.118	0.227	1.537	0.319	8.713	0.288	38.292	0.061	0.022	98.891	10.224	29.092	99.915
01-JR-SG-001-256	0.043	43.544	0.309	0.132	1.756	0.524	5.815	0.255	45.298	0.051	0.016	97.743	17.350	29.687	99.481
01-JR-SG-001-258	0.021	54.780	0.129	0.465	1.078	0.241	13.857	0.216	28.567	0.111	0.015	99.480	4.215	24.774	99.902
01-JR-SG-001-259	0.030	54.058	0.129	0.329	0.625	0.359	13.661	0.371	29.144	0.042	0.009	98.757	5.065	24.586	99.264
01-JR-SG-001-260	0.051	54.115	0.201	0.383	0.645	0.324	12.729	0.279	30.665	0.080	0.010	99.482	4.738	26.402	99.957
01-JR-SG-001-261	0.018	50.723	0.152	0.380	1.315	0.297	12.419	0.316	32.823	0.094	0.006	98.543	10.115	23.721	99.556
01-JR-SG-001-262	0.030	53.673	0.180	0.327	0.590	0.337	13.116	0.322	30.597	0.078	0.007	99.257	5.944	25.248	99.853
01-JR-SG-001-263	0.042	54.213	0.145	0.523	2.367	0.314	14.153	0.276	27.418	0.169	0.027	99.647	4.057	23.768	100.053
01-JR-SG-001-265	0.054	55.567	0.160	0.468	1.362	0.260	14.535	0.279	27.197	0.131	0.037	100.050	3.248	24.274	100.375
01-JR-SG-001-266	0.040	54.087	0.123	0.538	0.242	0.277	12.466	0.278	31.801	0.084	0.002	99.938	5.694	26.678	100.508
01-JR-SG-007-028	0.038	50.085	0.000	0.789	0.408	0.275	6.550	1.100	36.673	0.093	0.017	96.028	4.495	32.628	96.478
01-JR-SG-007-029	0.033	50.016	0.093	0.261	3.111	0.420	9.812	0.267	35.051	0.133	0.000	99.197	7.950	27.897	99.994
01-JR-SG-008-004	0.053	53.642	0.031	0.552	0.928	0.398	11.775	0.283	32.154	0.055	0.015	99.886	5.031	27.627	100.390
01-JR-SG-010-020	0.046	52.947	0.174	0.467	0.479	0.372	11.291	0.261	33.270	0.061	0.001	99.369	5.858	27.999	99.956
01-JR-SG-010-022	0.031	50.039	0.026	0.583	0.164	0.317	9.091	0.231	38.256	0.036	0.030	98.804	10.211	29.068	99.827
01-JR-SG-011-14	0.029	51.085	0.165	0.414	4.632	0.408	12.207	0.284	30.168	0.183	0.021	99.596	6.231	24.561	100.220
01-JR-TM-002-006	0.042	48.282	0.228	0.189	1.021	0.513	8.410	0.310	39.721	0.061	0.005	98.782	11.736	29.161	99.958
01-JR-TM-004-014	0.055	51.784	0.171	0.260	1.060	0.447	10.536	0.325	34.838	0.061	0.000	99.537	7.199	28.361	100.258
01-JR-TM-004-015	0.017	47.736	0.055	0.387	0.061	0.361	7.502	0.262	42.301	0.008	0.005	98.695	13.748	29.931	100.072
01-JR-TM-004-016	0.026	52.147	0.164	0.242	1.364	0.364	10.980	0.334	33.514	0.072	0.018	99.225	6.476	27.687	99.874
01-JR-TM-004-017	0.040	52.691	0.003	0.544	0.988	0.295	11.896	0.240	32.487	0.102	0.007	99.293	6.816	26.354	99.976
01-JR-TM-004-018	0.025	52.013	0.252	0.235	1.520	0.445	10.903	0.303	33.591	0.122	0.006	99.415	6.303	27.919	100.047
01-JR-TM-005-032	0.041	50.601	0.111	0.256	1.147	0.302	9.412	0.279	36.802	0.067	0.044	99.062	8.681	28.991	99.932
01-JR-TM-005-033	0.034	52.956	0.178	0.195	0.332	0.420	11.508	0.312	33.362	0.018	0.000	99.315	6.318	27.677	99.948
01-JR-TM-005-034	0.041	50.858	0.227	0.174	0.389	0.430	10.011	0.286	36.481	0.012	0.003	98.912	8.798	28.564	99.793
01-JR-TM-005-035	0.131	53.040	0.090	0.596	0.508	0.290	11.606	0.254	31.976	0.091	0.005	98.587	5.111	27.377	99.099
01-JR-TM-005-037	0.023	50.907	0.275	0.165	0.372	0.393	10.050	0.332	36.251	0.029	0.009	98.806	8.678	28.443	99.675

Sample	SiO_2	TiO_2	Nb_2O_5	Al_2O_3	Cr_2O_3	V_2O_3	MgO	MnO	FeO*	NiO	ZnO	Total	Fe_2O_3	FeO	Total
01-JR-TM-005-038	0.047	44.585	0.469	0.096	3.298	0.465	7.443	0.277	40.943	0.072	0.017	97.712	14.648	27.763	99.180
01-JR-TM-005-040	0.042	52.774	0.249	0.272	1.406	0.280	11.570	0.289	31.695	0.068	0.003	98.648	4.951	27.240	99.144
01-JR-TM-005-041	0.043	54.690	0.078	0.337	0.508	0.337	13.283	0.312	29.932	0.066	0.012	99.598	4.606	25.788	100.059
01-JR-TM-005-042	0.034	49.575	0.267	0.418	1.341	0.517	12.021	0.181	34.094	0.104	0.008	98.560	11.202	24.015	99.682
01-JR-TM-005-043	0.000	53.871	0.085	0.314	0.463	0.357	12.292	0.296	31.512	0.055	0.011	99.256	5.200	26.833	99.777
01-JR-TM-005-044	0.032	54.857	0.156	0.535	0.488	0.371	14.257	0.406	28.548	0.092	0.013	99.755	4.825	24.206	100.238
01-JR-TM-005-046	0.030	52.037	0.291	0.234	0.391	0.462	10.923	0.315	34.471	0.024	0.010	99.188	7.126	28.059	99.902
01-JR-TM-005-047	0.028	53.620	0.361	0.608	0.672	0.444	14.230	0.275	29.044	0.153	0.049	99.484	6.143	23.516	100.099
01-JR-TM-005-049	0.025	52.724	0.313	0.189	0.289	0.439	11.299	0.304	33.753	0.010	0.021	99.366	6.390	28.003	100.006
01-JR-TM-005-051	0.035	49.085	0.156	0.247	0.862	0.411	10.798	0.325	36.301	0.084	0.000	98.304	12.173	25.348	99.524
01-JR-TM-005-052	0.006	54.454	0.278	0.763	0.663	0.306	14.167	0.220	28.599	0.147	0.021	99.624	4.966	24.131	100.122
01-JR-TM-005-053	0.021	50.594	0.247	0.145	0.330	0.357	9.271	0.304	37.294	0.020	0.010	98.593	8.666	29.496	99.461
01-JR-TM-005-054	0.050	54.851	0.085	0.441	0.977	0.795	14.008	0.236	28.106	0.089	0.016	99.654	2.972	25.432	99.952
01-JR-TM-005-055	0.031	43.556	0.256	0.134	2.246	0.485	5.975	0.290	44.570	0.062	0.018	97.623	17.047	29.231	99.331
01-JR-TM-005-056	0.015	53.940	0.233	0.266	0.384	0.323	12.038	0.304	32.161	0.038	0.021	99.723	5.212	27.471	100.245
01-JR-TM-005-057	0.053	49.709	0.182	0.282	1.621	0.310	8.681	0.282	37.840	0.062	0.035	99.057	9.152	29.605	99.974
01-JR-TM-005-058	0.009	47.134	0.399	0.066	3.252	0.434	8.307	0.323	38.361	0.093	0.032	98.410	11.220	28.265	99.534
01-JR-TM-005-059	0.042	54.660	0.148	0.421	0.360	0.304	13.332	0.280	29.895	0.063	0.018	99.523	4.633	25.726	99.987
01-JR-TM-005-060	0.052	49.913	0.185	0.288	1.478	0.343	8.935	0.297	37.484	0.051	0.017	99.043	8.983	29.401	99.943
01-JR-TM-005-061	0.024	51.007	0.310	0.148	0.364	0.424	9.701	0.308	36.757	0.032	0.001	99.076	8.320	29.271	99.910
01-JR-TM-005-063	0.026	52.235	0.300	0.200	0.389	0.354	10.150	0.289	35.256	0.030	0.004	99.233	6.425	29.475	99.877
01-JR-TM-005-064	0.036	51.767	0.183	0.291	0.844	0.284	9.393	0.285	36.453	0.047	0.017	99.600	7.000	30.154	100.301
01-JR-TM-005-065	0.049	55.431	0.067	0.576	2.457	0.232	14.736	0.304	25.948	0.230	0.003	100.033	2.662	23.553	100.300
01-JR-TM-008-007	0.038	53.239	0.083	0.251	1.414	0.407	11.283	0.310	32.764	0.071	0.011	99.871	5.122	28.155	100.384
01-JR-BD-001-017	0.044	51.900	0.139	0.510	3.340	0.402	12.407	0.242	30.196	0.155	0.013	99.348	5.781	24.994	99.927
01-JR-BD-001-018	0.027	50.298	0.000	0.578	0.064	0.327	9.362	0.293	37.942	0.062	0.018	98.971	10.244	28.724	99.997
01-JR-BD-001-019	0.025	52.764	0.035	0.541	0.392	0.346	11.619	0.266	32.942	0.058	0.012	99.000	6.580	27.022	99.659
CRUSTAL ILMENITES															
01-JR-MA-002-045	0.031	48.338	0.000	0.022	0.030	0.253	0.358	0.516	49.802	0.006	0.000	99.356	7.850	42.738	100.143
01-JR-MA-002-046	0.038	50.077	0.000	0.026	0.018	0.130	0.613	0.419	48.272	0.000	0.000	99.593	5.008	43.766	100.095
01-JR-MA-002-047	0.037	48.584	0.000	0.025	0.023	0.175	0.634	0.451	49.820	0.000	0.002	99.751	8.222	42.422	100.575
01-JR-MA-004-014	0.036	48.767	0.049	0.068	0.017	0.151	0.703	0.350	48.857	0.009	0.022	99.029	7.006	42.553	99.731
01-JR-MA-006-005	0.034	49.858	0.030	0.047	0.042	0.072	0.983	0.245	48.041	0.018	0.016	99.386	5.613	42.990	99.948
01-JR-MA-006-006	0.035	50.791	0.044	0.039	0.032	0.094	1.066	0.316	46.951	0.013	0.028	99.409	3.663	43.655	99.776
01-JR-MA-006-007	0.026	49.806	0.042	0.043	0.057	0.313	0.999	0.291	47.888	0.002	0.020	99.487	5.138	43.265	100.002
01-JR-MA-006-008	0.026	49.742	0.013	0.075	0.064	0.354	0.809	0.178	48.243	0.000	0.009	99.513	5.043	43.705	100.018
01-JR-MA-006-009	0.047	50.962	0.000	0.037	0.056	0.173	1.148	0.264	46.352	0.023	0.044	99.106	2.855	43.783	99.392
01-JR-MA-012-006	0.050	51.043	0.075	0.000	0.001	0.000	0.025	2.417	45.970	0.000	0.012	99.593	2.703	43.538	99.864
01-JR-MA-014-035	0.024	45.863	0.000	0.024	0.101	0.874	0.811	0.408	50.630	0.000	0.019	98.754	10.950	40.777	99.851
01-JR-MA-014-038	0.023	48.848	0.014	0.040	0.000	0.258	0.369	0.211	49.602	0.004	0.050	99.419	6.829	43.458	100.103
01-JR-MA-014-039	0.022	49.098	0.035	0.006	0.012	0.104	0.411	1.007	48.887	0.000	0.029	99.611	6.985	42.602	100.311
01-JR-MA-014-040	0.002	51.642	0.000	0.013	0.000	0.061	0.546	0.292	47.403	0.000	0.032	99.991	2.403	45.241	100.232
01-JR-MA-014-041	0.045	48.959	0.000	0.040	0.042	0.293	1.548	0.463	48.181	0.000	0.000	99.571	7.630	41.316	100.335
01-JR-MA-014-042	0.019	49.901	0.018	0.032	0.166	0.253	0.568	0.427	48.303	0.000	0.011	99.698	4.937	43.861	100.193
01-JR-MA-014-043	0.043	51.357	0.032	0.022	0.001	0.028	0.320	1.706	46.584	0.004	0.018	100.115	2.877	43.995	100.403
01-JR-MA-014-044	0.032	49.138	0.037	0.029	0.037	0.214	0.548	0.189	49.296	0.000	0.028	99.548	6.540	43.411	100.203
01-JR-MA-014-058	0.028	47.473	0.022	0.058	0.000	0.252	1.736	0.582	49.010	0.000	0.000	99.161	10.611	39.462	100.224
01-JR-MA-015-020	0.024	50.031	0.060	0.012	0.000	0.062	0.139	1.422	47.724	0.000	0.014	99.488	4.715	43.482	99.960

Sample	SiO2	TiO2	Nb2O5	Al2O3	Cr2O3	V2O5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe2O3	FeO	Total
01-JR-MA-015-021	0.026	51.301	0.000	0.006	0.009	0.107	0.924	0.201	47.208	0.013	0.032	99.827	3.074	44.442	100.135
01-JR-MA-015-022	0.019	51.080	0.327	0.000	0.015	0.000	0.004	2.378	46.376	0.000	0.080	100.279	2.837	43.824	100.563
01-JR-MA-015-023	0.031	51.170	0.328	0.011	0.001	0.000	0.016	3.422	45.040	0.000	0.070	100.089	2.434	42.850	100.333
01-JR-MA-015-024	0.033	49.285	0.047	0.008	0.013	0.105	0.150	1.222	48.456	0.006	0.016	99.341	6.007	43.051	99.943
01-JR-MA-015-025	0.032	50.573	0.082	0.015	0.020	0.057	0.523	0.415	48.104	0.000	0.022	99.843	4.202	44.323	100.264
01-JR-MA-015-026	0.022	51.374	0.230	0.022	0.000	0.000	0.025	2.656	45.770	0.000	0.044	100.143	2.301	43.700	100.374
01-JR-MA-015-027	0.000	49.913	0.973	0.000	0.008	0.000	0.005	2.183	46.368	0.004	0.113	99.567	3.062	43.613	99.874
01-JR-MA-015-028	0.030	51.054	0.048	0.000	0.023	0.038	0.444	0.455	47.422	0.000	0.013	99.527	2.920	44.795	99.820
01-JR-MA-015-029	0.028	50.280	0.834	0.009	0.000	0.004	0.024	2.312	46.299	0.000	0.074	99.864	2.882	43.706	100.153
01-JR-MA-015-030	0.019	51.044	0.258	0.000	0.000	0.000	0.027	2.568	45.650	0.000	0.071	99.637	2.399	43.491	99.877
01-JR-MA-015-033	0.021	49.082	0.003	0.019	0.018	0.138	0.216	0.442	48.761	0.006	0.020	98.726	5.816	43.527	99.309
01-JR-MA-027-009	0.000	50.654	0.045	0.036	0.001	0.009	0.137	1.204	47.581	0.000	0.009	99.676	3.822	44.142	100.059
01-JR-MA-028-008	0.045	52.676	0.000	0.007	0.022	0.049	0.348	1.012	46.107	0.007	0.013	100.286	0.300	45.837	100.316
01-JR-MA-028-009	0.040	50.591	0.044	0.016	0.025	0.033	0.404	0.496	47.981	0.000	0.006	99.636	3.964	44.414	100.033
01-JR-MA-028-010	0.051	51.335	0.086	0.009	0.000	0.000	0.005	2.777	45.205	0.002	0.000	99.470	1.902	43.493	99.661
01-JR-MA-028-011	0.022	49.388	1.049	0.001	0.020	0.000	0.000	2.374	46.048	0.000	0.074	98.976	3.273	43.103	99.304
01-JR-MA-029-011	0.033	50.328	0.031	0.058	0.051	0.301	0.642	0.215	47.819	0.000	0.043	99.521	3.793	44.406	99.901
01-JR-MA-029-021	0.038	51.345	0.095	0.008	0.007	0.000	0.017	2.929	44.654	0.000	0.024	99.117	1.503	43.302	99.268
01-JR-MA-029-022	0.021	48.427	0.000	0.027	0.022	0.353	1.083	0.190	48.397	0.006	0.030	98.556	7.136	41.976	99.271
01-JR-MA-029-023	0.044	51.706	0.088	0.028	0.000	0.000	0.020	2.796	45.009	0.002	0.010	99.703	1.381	43.766	99.841
01-JR-MA-029-024	0.023	51.498	0.558	0.007	0.000	0.029	0.009	2.767	44.853	0.000	0.076	99.820	0.836	44.101	99.904
01-JR-MA-030-008	0.000	48.941	0.020	0.043	0.006	0.060	0.100	0.350	49.350	0.001	0.044	98.915	6.441	43.554	99.560
01-JR-MA-030-009	0.022	49.471	0.021	0.069	0.035	0.196	0.472	0.204	48.748	0.000	0.006	99.244	5.507	43.792	99.796
01-JR-MA-030-010	0.046	48.186	0.076	0.025	0.059	0.208	0.587	0.270	49.201	0.000	0.007	98.665	7.479	42.471	99.414
01-JR-MA-032-010	0.033	49.924	0.000	0.038	0.014	0.174	0.834	0.263	47.895	0.016	0.019	99.210	4.969	43.424	99.708
01-JR-MA-032-011	0.000	49.012	0.021	0.054	0.002	0.095	0.399	0.510	48.991	0.000	0.008	99.092	6.645	43.012	99.758
01-JR-MA-032-012	0.060	50.460	0.000	0.039	0.000	0.137	0.892	0.261	46.721	0.006	0.022	98.598	3.263	43.785	98.925
01-JR-MA-032-013	0.033	49.870	0.023	0.033	0.006	0.098	0.462	0.332	48.699	0.002	0.020	99.578	5.349	43.886	100.114
01-JR-MA-032-014	0.030	48.006	0.013	0.026	0.084	0.437	0.328	0.214	49.693	0.004	0.018	98.853	7.340	43.089	99.588
01-JR-MA-032-015	0.022	48.571	0.020	0.043	0.051	0.116	0.481	0.197	49.405	0.010	0.014	98.930	7.307	42.830	99.662
01-JR-MA-032-016	0.013	50.358	0.021	0.045	0.016	0.197	0.824	0.262	47.414	0.000	0.034	99.184	3.938	43.870	99.579
01-JR-MA-032-017	0.047	50.090	0.044	0.028	0.017	0.133	1.027	0.291	47.332	0.000	0.016	99.025	4.572	43.218	99.483
01-JR-MA-032-018	0.031	48.017	0.035	0.047	0.027	0.194	0.351	0.326	50.326	0.000	0.028	99.382	8.608	42.580	100.244
01-JR-MA-032-019	0.032	48.229	0.000	0.015	0.012	0.036	0.216	0.414	49.756	0.000	0.037	98.747	7.922	42.628	99.541
01-JR-MA-033-018	0.018	49.673	0.049	0.021	0.026	0.115	0.342	0.356	47.760	0.001	0.023	98.384	4.253	43.933	98.810
01-JR-MA-033-021	0.033	49.673	0.005	0.034	0.044	0.166	0.520	0.172	48.613	0.004	0.004	99.268	5.274	43.867	99.796
01-JR-MA-033-022	0.042	51.956	0.322	0.013	0.012	0.000	0.035	3.375	44.325	0.000	0.145	100.225	0.905	43.511	100.316
01-JR-MA-033-023	0.022	49.466	0.351	0.007	0.003	0.004	0.080	6.036	42.890	0.000	0.426	99.285	5.143	38.262	99.800
01-JR-MA-033-024	0.042	48.320	0.061	0.007	0.010	0.190	0.272	0.443	49.419	0.000	0.012	98.776	7.218	42.924	99.499
01-JR-MA-033-025	0.040	49.871	0.035	0.022	0.011	0.047	0.464	0.471	48.722	0.007	0.032	99.722	5.617	43.668	100.285
01-JR-MA-033-026	0.042	48.650	0.412	0.007	0.020	0.026	0.021	2.142	48.257	0.008	0.204	99.789	7.075	41.891	100.498
01-JR-MA-033-027	0.028	50.449	0.049	0.022	0.000	0.022	0.350	0.580	47.499	0.010	0.009	99.018	3.601	44.259	99.379
01-JR-MA-033-028	0.054	51.671	0.006	0.053	0.027	0.049	2.320	0.294	44.758	0.027	0.000	99.259	2.892	42.156	99.549
01-JR-MA-033-029	0.036	51.502	0.024	0.048	0.037	0.162	1.503	0.301	45.971	0.015	0.000	99.599	2.590	43.640	99.859
01-JR-MA-033-030	0.025	47.185	0.000	0.048	0.035	0.220	0.671	0.249	49.957	0.000	0.021	98.411	9.574	41.342	99.370
01-JR-MA-033-034	0.026	49.058	0.023	0.045	0.051	0.240	0.807	0.189	48.392	0.007	0.017	98.855	6.104	42.899	99.467
01-JR-MA-033-035	0.036	51.819	0.000	0.019	0.025	0.105	0.819	0.255	46.892	0.000	0.044	100.014	2.046	45.051	100.219
01-JR-MA-033-036	0.046	48.584	0.049	0.026	0.020	0.179	0.228	0.215	49.943	0.000	0.009	99.299	7.218	43.448	100.022
01-JR-MA-039-004	0.051	49.359	1.311	0.008	0.000	0.000	0.000	2.840	45.711	0.001	0.047	99.328	3.073	42.946	99.636

Sample	SiO_2	TiO_2	Nb_2O_5	Al_2O_3	Cr_2O_3	V_2O_5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe_2O_3	FeO	Total
01-JR-MA-039-005	0.028	51.504	0.000	0.000	0.010	0.000	0.052	3.790	43.704	0.004	0.047	99.139	1.481	42.372	99.287
01-JR-MA-040-035	0.015	50.781	0.050	0.034	0.017	0.406	0.188	1.301	46.934	0.003	0.017	99.746	2.474	44.708	99.994
01-JR-MA-040-036	0.023	51.030	0.074	0.030	0.016	0.081	0.666	0.212	47.402	0.000	0.000	99.534	2.978	44.723	99.832
01-JR-MA-040-037	0.015	48.869	0.355	0.000	0.015	0.000	0.008	2.991	46.640	0.000	0.055	98.948	5.985	41.255	99.548
01-JR-MA-040-038	0.029	51.486	0.323	0.035	0.007	0.000	0.000	2.286	45.204	0.000	0.049	99.419	0.978	44.324	99.517
01-JR-MA-040-039	0.007	51.823	0.066	0.037	0.003	0.600	0.014	3.290	44.558	0.000	0.041	100.439	0.358	44.236	100.475
01-JR-MA-040-040	0.026	50.425	0.000	0.025	0.029	0.097	0.672	0.199	48.060	0.013	0.016	99.562	4.397	44.103	100.003
01-JR-MA-040-041	0.032	52.009	0.084	0.010	0.000	0.000	0.033	2.749	45.119	0.000	0.032	100.068	1.214	44.027	100.190
01-JR-MA-048-005	0.040	51.664	0.145	0.011	0.000	0.010	0.035	3.354	44.599	0.000	0.036	99.894	1.568	43.188	100.051
01-JR-MA-048-006	0.000	49.322	1.480	0.014	0.000	0.000	0.029	2.357	45.895	0.000	0.125	99.222	2.769	43.404	99.499
01-JR-MA-052-003	0.040	47.971	0.006	0.028	0.016	0.213	0.668	0.552	49.975	0.000	0.000	99.469	9.108	41.779	100.382
01-JR-MA-055-003	0.023	49.506	0.000	0.025	0.021	0.143	1.233	0.422	47.440	0.001	0.019	98.833	5.902	42.129	99.424
01-JR-MA-059-009	0.032	49.659	0.058	0.017	0.015	0.043	0.114	0.934	48.141	0.010	0.031	99.054	5.004	43.639	99.555
01-JR-MA-059-011	0.025	47.591	0.040	0.039	0.008	0.030	0.083	0.973	50.448	0.000	0.008	99.245	9.637	41.776	100.211
01-JR-MA-060-005	0.026	51.581	0.041	0.021	0.003	0.012	0.202	0.401	47.447	0.000	0.021	99.755	1.948	45.694	99.950
01-JR-MA-065-004	0.020	49.821	0.000	0.055	0.110	0.297	1.297	0.161	47.646	0.000	0.039	99.446	5.401	42.786	99.987
01-JR-MA-065-005	0.040	51.120	0.486	0.011	0.029	0.035	0.031	3.052	45.009	0.000	0.050	99.863	1.780	43.408	100.041
01-JR-MA-065-006	0.045	49.558	0.021	0.024	0.012	0.016	0.235	0.798	48.883	0.002	0.010	99.604	6.061	43.429	100.211
01-JR-MA-065-007	0.022	51.239	0.000	0.006	0.002	0.048	0.090	1.298	46.988	0.010	0.001	99.704	2.550	44.693	99.960
01-JR-MA-065-008	0.048	50.847	0.000	0.052	0.006	0.135	0.943	0.282	47.335	0.004	0.011	99.663	3.689	44.015	100.033
01-JR-MA-065-009	0.022	49.774	0.022	0.047	0.049	0.111	0.751	0.189	48.364	0.006	0.015	99.350	5.477	43.436	99.899
01-JR-MA-067-003	0.002	48.530	0.029	0.047	0.030	0.408	0.700	0.558	48.903	0.005	0.012	99.224	7.126	42.491	99.938
01-JR-MA-067-004	0.010	47.477	0.000	0.065	0.070	0.392	0.779	0.331	49.884	0.005	0.043	99.056	9.252	41.559	99.983
01-JR-MA-067-005	0.040	51.119	0.000	0.000	0.003	0.000	0.091	1.125	47.390	0.000	0.029	99.797	3.001	44.689	100.098
01-JR-MA-069-002	0.038	51.358	0.044	0.019	0.000	0.000	0.153	1.648	46.609	0.000	0.031	99.900	2.558	44.307	100.156
01-JR-MA-073-010	0.032	51.247	0.000	0.109	0.029	0.054	1.470	0.712	45.417	0.000	0.029	99.099	2.863	42.841	99.386
01-JR-MA-073-012	0.034	50.766	0.006	0.000	0.005	0.036	0.265	1.263	47.095	0.000	0.019	99.489	3.454	43.987	99.835
01-JR-MA-073-014	0.052	50.547	0.000	0.028	0.000	0.000	0.289	0.966	47.478	0.000	0.012	99.372	3.851	44.013	99.758
01-JR-MA-073-020	0.023	51.162	0.000	0.032	0.069	0.253	0.751	0.229	46.579	0.000	0.028	99.126	1.933	44.840	99.320
01-JR-MA-073-021	0.031	50.231	0.004	0.015	0.011	0.007	0.290	1.242	47.246	0.017	0.005	99.099	4.244	43.427	99.524
01-JR-MA-073-026	0.039	51.165	0.025	0.052	0.010	0.010	0.586	0.403	47.179	0.005	0.000	99.474	2.819	44.642	99.756
01-JR-MA-073-029	0.023	51.242	0.057	0.027	0.022	0.045	0.430	0.447	47.458	0.006	0.001	99.758	2.716	45.014	100.030
01-JR-MA-073-041	0.032	46.285	0.028	0.029	0.013	0.166	0.341	0.845	51.114	0.000	0.014	98.867	11.822	40.477	100.051
01-JR-MA-073-043	0.053	50.390	0.020	0.025	0.016	0.025	0.205	1.122	48.169	0.000	0.013	100.038	4.717	43.924	100.511
01-JR-MA-073-046	0.017	50.821	0.044	0.027	0.010	0.041	0.353	1.045	47.134	0.005	0.019	99.516	3.345	44.124	99.851
01-JR-MA-073-047	0.033	50.961	0.000	0.027	0.026	0.121	0.567	0.289	47.989	0.005	0.022	100.040	3.622	44.730	100.403
01-JR-MA-073-048	0.032	50.197	0.061	0.014	0.006	0.013	0.278	1.224	47.816	0.000	0.025	99.666	4.789	43.507	100.146
01-JR-MA-073-049	0.017	51.805	0.000	0.105	0.001	0.089	1.477	0.662	45.960	0.010	0.009	100.135	2.816	43.426	100.417
01-JR-MA-073-078	0.042	49.131	0.016	0.023	0.058	0.220	0.939	0.346	48.176	0.000	0.023	98.974	6.250	42.552	99.600
01-JR-MA-073-079	0.009	50.859	0.024	0.027	0.000	0.076	0.268	0.631	47.809	0.000	0.030	99.733	3.401	44.749	100.074
01-JR-MA-073-080	0.054	49.059	0.007	0.028	0.017	0.143	0.756	0.280	48.462	0.000	0.026	98.832	6.336	42.761	99.467
01-JR-MA-073-082	0.029	50.097	0.023	0.008	0.013	0.018	0.322	1.030	47.969	0.000	0.009	99.518	4.952	43.513	100.014
01-JR-MA-074-031	0.028	50.774	0.044	0.054	0.018	0.124	1.049	0.375	47.047	0.000	0.019	99.532	3.754	43.670	99.908
01-JR-MA-074-033	0.033	50.695	0.000	0.017	0.000	0.004	0.190	0.969	47.837	0.004	0.034	99.783	3.954	44.279	100.179
01-JR-MA-074-036	0.035	50.482	0.000	0.017	0.000	0.014	0.302	0.756	48.184	0.019	0.035	99.844	4.531	44.107	100.298
01-JR-MA-075-027	0.041	51.458	0.041	0.008	0.003	0.000	0.223	0.827	46.682	0.010	0.044	99.337	1.777	45.083	99.515
01-JR-MA-075-028	0.031	50.575	0.094	0.009	0.014	0.058	0.327	0.448	48.614	0.000	0.019	100.189	4.398	44.657	100.630
01-JR-MA-075-030	0.040	50.609	0.111	0.000	0.010	0.035	0.160	1.392	47.316	0.000	0.036	99.709	3.678	44.006	100.078
01-JR-MA-075-031	0.014	49.737	0.077	0.037	0.000	0.044	0.335	0.566	48.805	0.000	0.007	99.622	5.652	43.719	100.188

Sample	SiO_2	TiO_2	Nb_2O_5	Al_2O_3	Cr_2O_3	V_2O_5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe_2O_3	FeO	Total
01-JR-MA-075-032	0.045	51.522	0.041	0.007	0.008	0.005	0.186	0.830	47.346	0.000	0.011	100.001	2.323	45.255	100.234
01-JR-MA-075-033	0.015	50.500	0.000	0.013	0.016	0.000	0.205	1.223	47.412	0.000	0.027	99.411	4.012	43.802	99.813
01-JR-MA-075-035	0.038	50.962	0.000	0.019	0.001	0.042	0.339	0.936	47.234	0.001	0.005	99.577	3.170	44.382	99.895
01-JR-MA-075-036	0.055	51.370	0.000	0.015	0.018	0.009	0.162	1.347	46.948	0.000	0.023	99.947	2.608	44.601	100.208
01-JR-MA-075-037	0.039	51.140	0.081	0.038	0.008	0.014	0.450	0.368	47.543	0.010	0.036	99.727	2.906	44.928	100.018
01-JR-MA-075-041	0.013	49.580	0.002	0.046	0.005	0.037	0.261	1.098	48.033	0.004	0.022	99.101	5.526	43.060	99.655
01-JR-MA-075-042	0.034	51.589	0.001	0.024	0.013	0.000	0.292	0.606	45.925	0.012	0.039	98.535	0.747	45.253	98.610
01-JR-MA-075-045	0.004	51.003	0.048	0.009	0.008	0.000	0.010	3.772	43.799	0.000	0.012	98.665	1.919	42.072	98.857
01-JR-MA-076-006	0.030	50.261	0.933	0.018	0.013	0.004	0.002	2.738	45.247	0.003	0.063	99.312	2.038	43.413	99.516
01-JR-MA-079-023	0.053	50.309	0.893	0.000	0.005	0.004	0.021	2.097	45.938	0.000	0.120	99.440	2.145	44.008	99.655
01-JR-MA-079-024	0.012	51.524	0.450	0.000	0.005	0.009	0.007	2.787	45.097	0.002	0.063	99.956	1.269	43.955	100.083
01-JR-MA-079-025	0.000	49.856	1.073	0.000	0.000	0.000	0.010	2.828	45.584	0.000	0.108	99.459	2.854	43.016	99.745
01-JR-MA-079-026	0.026	51.685	0.015	0.025	0.038	0.303	0.410	0.290	47.017	0.006	0.038	99.853	1.197	45.940	99.973
01-JR-MA-079-027	0.042	50.268	0.992	0.007	0.000	0.000	0.019	1.904	45.975	0.000	0.101	99.308	1.890	44.275	99.497
01-JR-MA-079-028	0.048	51.680	0.000	0.011	0.007	0.030	0.070	0.922	46.807	0.007	0.001	99.583	1.439	45.512	99.727
01-JR-MA-079-029	0.040	51.906	0.024	0.003	0.003	0.038	0.301	1.085	46.016	0.000	0.020	99.436	0.954	45.157	99.532
01-JR-MA-079-030	0.040	49.305	0.048	0.013	0.022	0.098	0.274	0.747	48.267	0.004	0.002	98.820	5.474	43.342	99.368
01-JR-MA-079-031	0.038	52.157	0.000	0.007	0.021	0.048	0.202	1.278	45.591	0.000	0.013	99.355	0.259	45.358	99.381
01-JR-MA-082-003	0.046	52.509	0.000	0.012	0.037	0.069	0.996	0.250	45.811	0.010	0.016	99.756	0.534	45.331	99.809
01-JR-MA-082-004	0.039	50.961	0.073	0.068	0.008	0.168	1.737	0.262	46.119	0.012	0.000	99.447	3.638	42.845	99.812
01-JR-MA-097-034	0.054	50.131	0.101	0.000	0.019	0.066	0.204	0.608	48.117	0.000	0.028	99.328	4.182	44.354	99.747
01-JR-MA-097-049	0.030	52.249	0.000	0.034	0.000	0.022	1.222	0.725	45.790	0.000	0.011	100.083	1.841	44.134	100.267
01-JR-MA-097-053	0.039	49.896	0.002	0.016	0.016	0.175	0.064	1.157	48.666	0.010	0.010	100.051	5.308	43.890	100.583
01-JR-MA-097-055	0.009	51.011	0.067	0.021	0.010	0.000	1.087	2.674	44.691	0.000	0.000	99.570	3.758	41.309	99.947
01-JR-MA-097-059	0.016	51.524	0.002	0.003	0.005	0.017	0.301	0.998	47.178	0.000	0.009	100.053	2.614	44.826	100.315
01-JR-MA-100-022	0.027	51.575	0.000	0.009	0.000	0.000	0.265	0.615	47.381	0.014	0.020	99.906	2.330	45.285	100.139
01-JR-MA-103-002	0.046	49.502	0.070	0.035	0.037	0.071	0.657	0.428	48.556	0.011	0.015	99.428	6.031	43.129	100.032
01-JR-MA-103-003	0.015	50.361	0.025	0.036	0.035	0.08[illegible]	0.948	0.288	47.890	0.000	0.024	99.710	4.913	43.469	100.202
01-JR-MA-103-004	0.038	50.406	0.000	0.034	0.036	[illegible]	1.139	0.414	47.181	0.012	0.026	99.380	4.604	43.038	99.841
01-JR-MA-103-005	0.044	48.879	0.000	0.015	0.022	0.14[illegible]	0.758	0.542	49.019	0.011	0.010	99.448	7.443	42.322	100.194
01-JR-MA-103-006	0.016	50.136	0.000	0.029	0.052	0.095	0.875	0.248	48.126	0.000	0.018	99.595	5.221	43.428	100.118
01-JR-MA-104-013	0.021	50.514	0.015	0.046	0.132	0.424	0.653	0.141	47.008	0.019	0.016	98.989	2.457	44.797	99.235
01-JR-MA-104-014	0.024	51.242	0.046	0.026	0.064	0.194	0.496	0.168	47.168	0.004	0.000	99.432	1.958	45.406	99.628
01-JR-MA-105-002	0.019	48.683	0.002	0.024	0.089	0.491	0.626	0.155	48.350	0.000	0.000	98.439	5.605	43.306	99.001
01-JR-MA-105-003	0.019	48.414	0.000	0.032	0.024	0.278	0.549	0.222	48.530	0.000	0.021	98.089	6.394	42.776	98.730
01-JR-MA-105-004	0.010	51.214	0.001	0.028	0.028	0.160	0.730	0.175	47.153	0.008	0.030	99.537	2.606	44.808	99.798
01-JR-MA-105-005	0.026	51.168	0.077	0.034	0.011	0.154	1.020	0.268	47.167	0.005	0.024	99.954	3.236	44.255	100.278
01-JR-MA-106-015	0.017	48.956	0.016	0.034	0.100	0.359	0.804	0.198	48.852	0.000	0.000	99.336	6.509	42.995	99.988
01-JR-MA-106-016	0.037	50.145	0.019	0.055	0.029	0.105	0.848	0.286	47.821	0.005	0.011	99.361	4.793	43.508	99.841
01-JR-MA-106-046	0.006	49.021	0.025	0.022	0.000	0.047	0.334	0.572	49.352	0.000	0.039	99.418	7.080	42.982	100.127
01-JR-MA-107-005	0.046	50.889	0.055	0.035	0.029	0.118	0.828	0.252	47.482	0.005	0.010	99.749	3.516	44.318	100.101
01-JR-MA-111-011	0.015	48.032	0.000	0.049	0.049	0.235	0.773	0.255	50.192	0.000	0.052	99.652	9.215	41.900	100.575
01-JR-MA-111-012	0.014	50.992	0.463	0.014	0.006	0.019	0.019	5.093	42.425	0.004	0.323	99.372	1.672	40.921	99.540
01-JR-MA-111-013	0.004	48.890	0.000	0.000	0.000	0.040	0.278	0.454	49.120	0.005	0.018	98.809	6.739	43.056	99.484
01-JR-MA-111-014	0.000	51.642	0.071	0.049	0.078	0.240	1.113	0.164	46.479	0.000	0.036	99.872	1.962	44.714	100.069
01-JR-MA-111-015	0.034	50.188	0.013	0.042	0.031	0.130	0.477	0.259	48.375	0.000	0.004	99.553	4.556	44.276	100.009
01-JR-MA-111-016	0.013	50.411	0.116	0.023	0.001	0.000	0.302	0.740	48.051	0.000	0.037	99.694	4.332	44.153	100.128
01-JR-MA-111-017	0.025	49.296	0.014	0.061	0.043	0.280	0.605	0.195	48.914	0.000	0.038	99.471	6.008	43.508	100.073
01-JR-MA-111-018	0.010	51.654	0.286	0.000	0.012	0.000	0.004	3.229	44.154	0.007	0.145	99.501	0.884	43.359	99.590

Sample	SiO_2	TiO_2	Nb_2O_5	Al_2O_3	Cr_2O_3	V_2O_5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe_2O_3	FeO	Total
01-JR-MA-111-019	0.023	50.661	0.036	0.027	0.000	0.098	1.052	0.183	47.641	0.011	0.025	99.757	4.396	43.685	100.197
01-JR-MA-111-020	0.019	49.520	0.101	0.033	0.025	0.107	0.819	0.262	48.711	0.004	0.013	99.614	6.245	43.092	100.240
01-JR-MA-111-021	0.042	49.917	0.000	0.026	0.053	0.116	0.939	0.187	47.943	0.000	0.017	99.240	5.223	43.244	99.763
01-JR-MA-111-025	0.045	49.924	0.036	0.029	0.047	0.185	0.718	0.260	48.457	0.001	0.012	99.714	5.259	43.725	100.241
01-JR-MA-111-026	0.016	49.703	0.437	0.009	0.011	0.000	0.019	3.348	46.073	0.000	0.286	99.902	5.071	41.510	100.410
01-JR-MA-117-004	0.024	48.176	0.000	0.065	0.048	0.326	0.409	0.209	49.685	0.000	0.038	98.980	7.549	42.892	99.736
01-JR-MA-123-060	0.018	48.587	0.000	0.000	0.020	0.099	0.163	0.988	49.340	0.001	0.005	99.221	7.520	42.573	99.974
01-JR-MA-123-061	0.037	51.644	0.020	0.069	0.016	0.031	0.562	1.083	46.008	0.011	0.011	99.492	1.746	44.437	99.667
01-JR-MA-123-062	0.050	52.840	0.000	0.018	0.000	0.000	1.185	0.733	45.426	0.001	0.009	100.262	0.792	44.713	100.341
01-JR-MA-123-063	0.026	52.554	0.000	0.018	0.000	0.009	1.218	0.749	45.413	0.000	0.009	99.996	1.162	44.367	100.112
01-JR-MA-123-066	0.016	51.907	0.041	0.013	0.005	0.056	1.135	0.725	45.670	0.000	0.000	99.568	1.775	44.072	99.746
01-JR-MA-123-069	0.042	51.214	0.032	0.057	0.018	0.123	1.424	0.665	46.204	0.000	0.003	99.782	3.428	43.120	100.125
01-JR-MA-123-071	0.017	50.021	0.054	0.072	0.014	0.168	0.273	1.587	47.260	0.004	0.015	99.485	4.496	43.215	99.935
01-JR-MA-123-073	0.031	50.050	0.032	0.000	0.005	0.019	0.212	0.442	48.938	0.000	0.011	99.740	5.183	44.274	100.259
01-JR-MA-130-008	0.042	52.477	0.338	0.013	0.030	0.000	0.000	6.120	41.404	0.009	0.000	100.433	0.006	41.398	100.434
01-JR-MA-131-010	0.020	48.510	0.008	0.032	0.071	0.278	0.405	0.204	49.728	0.000	0.042	99.298	7.334	43.129	100.033
01-JR-MA-132-009	0.027	49.135	0.059	0.015	0.053	0.295	0.346	0.204	49.142	0.000	0.018	99.294	5.817	43.908	99.877
01-JR-MA-134-028	0.041	51.695	0.025	0.025	0.007	0.036	0.479	0.643	46.874	0.006	0.022	99.853	1.983	45.090	100.052
01-JR-MA-134-042	0.053	51.904	0.023	0.017	0.011	0.067	0.294	0.568	46.862	0.003	0.015	99.817	1.232	45.753	99.940
01-JR-MA-134-046	0.031	51.344	0.087	0.116	0.030	0.175	2.041	0.623	45.268	0.008	0.017	99.740	3.312	42.288	100.072
01-JR-MA-134-047	0.049	50.390	0.058	0.028	0.006	0.053	0.239	0.595	48.422	0.000	0.000	99.840	4.370	44.490	100.278
01-JR-MA-134-048	0.029	52.294	0.021	0.030	0.014	0.024	0.838	0.653	46.264	0.000	0.011	100.178	1.453	44.956	100.324
01-JR-MA-134-049	0.007	50.846	0.000	0.000	0.030	0.084	0.360	1.113	47.005	0.002	0.029	99.476	3.264	44.068	99.803
01-JR-MA-134-050	0.027	51.958	0.000	0.116	0.035	0.145	2.302	0.559	44.510	0.021	0.022	99.695	2.482	42.277	99.944
01-JR-MA-134-051	0.019	51.393	0.017	0.022	0.017	0.029	0.351	0.706	47.199	0.003	0.000	99.756	2.490	44.959	100.005
01-JR-MA-134-052	0.019	51.144	0.000	0.032	0.000	0.034	0.908	1.079	46.249	0.000	0.035	99.500	3.249	43.326	99.825
01-JR-MA-134-053	0.029	50.159	0.011	0.015	0.015	0.233	0.173	0.352	48.916	0.002	0.030	99.935	4.544	44.827	100.390
01-JR-MA-134-054	0.031	49.981	0.055	0.001	0.027	0.068	0.401	0.960	48.009	0.000	0.043	99.576	5.095	43.424	100.086
01-JR-MA-135-065	0.030	52.146	0.000	0.093	0.043	0.052	2.187	0.646	44.118	0.005	0.040	99.360	1.889	42.419	99.549
01-JR-MA-135-087	0.041	51.200	0.002	0.048	0.014	0.013	0.415	1.034	46.261	0.001	0.030	99.059	2.180	44.299	99.277
01-JR-MA-135-098	0.021	51.938	0.000	0.059	0.008	0.067	0.798	0.701	46.249	0.000	0.010	99.851	1.727	44.695	100.024
01-JR-MA-135-099	0.019	51.500	0.000	0.074	0.032	0.063	1.359	0.725	46.039	0.004	0.011	99.826	3.084	43.264	100.135
01-JR-MA-138-012	0.008	51.066	0.076	0.001	0.054	0.021	0.192	2.977	44.724	0.007	0.025	99.151	2.294	42.660	99.381
01-JR-MA-139-026	0.021	51.990	0.000	0.025	0.000	0.035	0.523	0.827	46.302	0.010	0.021	99.754	1.409	45.035	99.895
01-JR-MA-139-037	0.028	52.069	0.006	0.047	0.018	0.070	1.113	0.717	45.822	0.007	0.024	99.921	1.763	44.236	100.098
01-JR-MA-142-016	0.031	53.053	0.000	0.058	0.021	0.141	1.994	0.683	44.315	0.000	0.019	100.315	0.677	43.706	100.383
01-JR-MA-142-021	0.013	50.908	0.000	0.019	0.113	0.060	0.256	3.356	44.919	0.011	0.013	99.668	3.231	42.012	99.992
01-JR-MA-143-018	0.035	51.485	0.000	0.093	0.029	0.150	2.103	0.652	45.118	0.010	0.014	99.689	3.302	42.147	100.020
01-JR-MA-144-035	0.041	51.436	0.005	0.107	0.000	0.137	1.819	0.591	44.815	0.004	0.012	98.967	2.384	42.670	99.206
01-JR-MA-145-004	0.008	50.092	0.000	0.104	0.042	0.238	1.394	0.559	46.648	0.004	0.052	99.141	4.798	42.331	99.622
01-JR-MA-164-001	0.044	50.070	0.110	0.015	0.014	0.037	0.035	2.299	47.110	0.000	0.002	99.736	4.720	42.863	100.209
01-JR-MA-165-116	0.009	52.032	0.000	0.067	0.014	0.127	2.045	0.635	45.163	0.000	0.001	100.093	2.723	42.713	100.366
01-JR-MA-165-125	0.043	51.604	0.000	0.145	0.048	0.205	2.232	0.533	44.904	0.005	0.039	99.758	2.979	42.224	100.056
01-JR-MA-165-143	0.014	50.647	0.000	0.079	0.040	0.228	2.609	0.522	45.138	0.008	0.034	99.319	4.926	40.706	99.813
01-JR-MA-165-144	0.008	52.095	0.029	0.132	0.119	0.447	2.959	0.493	43.580	0.014	0.048	99.924	2.017	41.765	100.126
01-JR-MA-165-149	0.043	51.790	0.026	0.051	0.000	0.066	0.822	0.673	45.914	0.000	0.039	99.424	1.488	44.575	99.573
01-JR-MA-165-152	0.021	51.953	0.000	0.129	0.028	0.206	2.375	0.546	44.714	0.000	0.026	99.998	2.726	42.261	100.271
01-JR-MA-165-156	0.023	52.531	0.000	0.085	0.015	0.162	2.090	0.623	44.935	0.000	0.035	100.499	2.000	43.136	100.699
01-JR-MA-165-167	0.015	50.756	0.040	0.090	0.041	0.244	2.559	0.589	45.426	0.003	0.055	99.818	5.051	40.881	100.324

Sample	SiO_2	TiO_2	Nb_2O_5	Al_2O_3	Cr_2O_3	V_2O_5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe_2O_3	FeO	Total
01-JR-MA-165-182	0.025	50.343	0.000	0.131	0.038	0.304	2.716	0.495	45.860	0.007	0.024	99.943	6.055	40.412	100.550
01-JR-MA-165-188	0.064	51.354	0.034	0.107	0.059	0.221	2.712	0.566	45.003	0.009	0.023	100.152	4.218	41.208	100.575
01-JR-MA-167-033	0.034	51.406	0.015	0.009	0.073	0.039	0.232	3.426	45.205	0.001	0.021	100.461	3.070	42.442	100.769
01-JR-MA-167-034	0.016	51.342	0.000	0.017	0.008	0.000	0.481	2.436	45.485	0.023	0.009	99.817	2.946	42.834	100.112
01-JR-MA-170-004	0.044	51.675	0.046	0.035	0.017	0.048	0.437	1.044	46.702	0.000	0.028	100.076	2.129	44.786	100.289
01-JR-MA-170-005	0.062	49.653	0.015	0.090	0.056	0.293	1.851	0.424	46.708	0.002	0.039	99.193	5.855	41.439	99.780
01-JR-MA-170-007	0.032	52.016	0.000	0.012	0.057	0.003	0.276	3.501	44.210	0.008	0.000	100.115	1.597	42.773	100.275
01-JR-MA-172-022	0.025	51.018	0.000	0.027	0.007	0.088	0.019	2.091	46.082	0.000	0.014	99.371	2.444	43.883	99.616
01-JR-MA-172-027	0.031	50.276	0.101	0.000	0.020	0.236	0.063	4.526	44.386	0.000	0.000	99.639	3.726	41.033	100.012
01-JR-MA-172-028	0.038	51.283	0.000	0.130	0.019	0.153	2.322	0.557	45.073	0.004	0.036	99.615	3.787	41.666	99.994
01-JR-MA-172-032	0.035	51.657	0.000	0.088	0.031	0.242	2.196	0.564	45.048	0.007	0.029	99.897	2.987	42.360	100.196
01-JR-MA-173-031	0.032	50.953	0.077	0.015	0.002	0.000	0.285	4.111	44.152	0.017	0.001	99.645	3.223	41.252	99.968
01-JR-MA-174-021	0.056	50.642	0.050	0.020	0.000	0.153	1.205	0.657	46.457	0.006	0.012	99.258	3.760	43.073	99.635
01-JR-MA-174-023	0.032	51.278	0.063	0.126	0.002	0.192	2.592	0.582	44.910	0.003	0.000	99.780	4.001	41.310	100.181
01-JR-MA-174-024	0.043	51.745	0.020	0.075	0.018	0.070	1.335	0.689	45.439	0.006	0.029	99.469	2.036	43.607	99.673
01-JR-MA-174-025	0.012	52.473	0.035	0.019	0.017	0.006	1.088	0.784	45.496	0.009	0.009	99.948	1.109	44.498	100.059
01-JR-MA-179-014	0.055	51.981	0.012	0.062	0.023	0.266	2.295	0.542	44.767	0.000	0.007	100.010	2.410	42.598	100.252
01-JR-MA-180-060	0.027	51.563	0.000	0.076	0.008	0.096	1.073	0.690	46.035	0.004	0.000	99.572	2.331	43.937	99.806
01-JR-MA-182-040	0.039	52.975	0.063	0.073	0.009	0.053	2.790	0.587	43.180	0.000	0.028	99.797	1.039	42.245	99.901
01-JR-MA-182-041	0.014	52.709	0.000	0.035	0.015	0.060	1.778	0.707	44.426	0.003	0.023	99.770	0.915	43.602	99.862
01-JR-MA-183-025	0.016	51.242	0.035	0.012	0.074	0.027	0.143	4.157	44.194	0.000	0.000	99.900	2.756	41.714	100.176
01-JR-MA-187-011	0.021	50.454	0.000	0.110	0.020	0.165	1.807	0.614	46.322	0.013	0.000	99.526	5.023	41.802	100.029
01-JR-MA-187-012	0.043	50.202	0.021	0.101	0.040	0.230	2.107	0.521	45.929	0.023	0.029	99.246	5.198	41.252	99.767
01-JR-MA-191-007	0.023	52.427	0.014	0.080	0.010	0.075	1.846	0.637	44.625	0.014	0.032	99.783	1.440	43.330	99.927
01-JR-MA-191-008	0.026	52.181	0.010	0.079	0.017	0.044	1.846	0.663	44.852	0.000	0.000	99.718	1.976	43.074	99.916
01-JR-MA-191-009	0.036	52.717	0.000	0.100	0.005	0.086	2.389	0.596	43.904	0.012	0.013	99.858	1.337	42.701	99.992
01-JR-MA-192-007	0.041	51.871	0.049	0.096	0.013	0.074	2.069	0.570	44.793	0.001	0.036	99.613	2.474	42.567	99.861
01-JR-MA-197-005	0.049	52.648	0.030	0.014	0.003	0.051	0.110	3.321	43.243	0.010	0.020	99.499	0.000	43.243	99.499
01-JR-MA-201-003	0.033	50.472	0.097	0.019	0.014	0.092	0.149	0.645	48.130	0.000	0.048	99.699	3.795	44.715	100.079
01-JR-MA-206-013	0.014	52.374	0.003	0.000	0.066	0.184	1.203	0.627	45.622	0.013	0.000	100.106	1.117	44.617	100.218
01-JR-MA-211-007	0.040	52.761	0.017	0.031	0.007	0.042	1.751	0.675	44.000	0.000	0.018	99.342	0.269	43.758	99.369
01-JR-MA-212-034	0.015	49.827	0.003	0.091	0.026	0.073	1.248	0.682	47.093	0.003	0.018	99.079	5.649	42.010	99.645
01-JR-MA-212-044	0.011	51.993	0.017	0.026	0.020	0.072	1.102	0.749	46.024	0.014	0.031	100.059	2.097	44.137	100.269
01-JR-MA-213-009	0.017	50.008	0.000	0.113	0.036	0.224	1.081	0.979	46.841	0.000	0.003	99.302	4.910	42.423	99.794
01-JR-MA-214-158	0.018	50.642	0.000	0.000	0.092	0.039	0.265	4.127	44.426	0.000	0.000	99.609	3.840	40.971	99.994
01-JR-MA-214-160	0.028	52.186	0.040	0.114	0.029	0.294	2.297	0.562	44.422	0.000	0.024	99.996	1.818	42.786	100.178
01-JR-MA-214-181	0.009	50.414	0.000	0.000	0.084	0.031	0.178	3.677	45.482	0.004	0.000	99.879	4.593	41.349	100.339
01-JR-MA-214-200	0.035	50.351	0.073	0.168	0.020	0.157	2.312	0.589	45.851	0.023	0.025	99.604	5.518	40.886	100.157
01-JR-MA-214-205	0.023	50.801	0.000	0.066	0.010	0.074	1.850	0.664	45.969	0.003	0.013	99.473	4.585	41.844	99.932
01-JR-MA-214-226	0.032	50.954	0.000	0.009	0.046	0.028	0.190	4.063	44.714	0.012	0.013	100.061	3.654	41.426	100.427
01-JR-MA-214-245	0.049	53.231	0.018	0.028	0.013	0.076	0.130	2.846	44.052	0.005	0.000	100.448	0.000	44.052	100.448
01-JR-MA-218-040	0.004	50.816	0.000	0.025	0.014	0.112	0.255	0.554	48.372	0.000	0.019	100.171	3.919	44.846	100.564
01-JR-MA-221-010	0.041	52.745	0.094	0.026	0.000	0.000	0.293	20.489	26.316	0.028	0.013	100.045	0.052	26.269	100.050
01-JR-MA-221-011	0.013	52.832	0.002	0.005	0.019	0.000	0.135	1.928	45.118	0.000	0.010	100.062	0.000	45.118	100.062
01-JR-MA-221-012	0.023	52.425	0.039	0.058	0.003	0.049	1.746	0.673	44.319	0.000	0.040	99.375	0.953	43.462	99.470
01-JR-MA-221-013	0.066	52.031	0.016	0.051	0.009	0.000	1.588	0.688	45.172	0.025	0.016	99.662	2.058	43.320	99.868
01-JR-MA-221-014	0.024	52.700	0.034	0.076	0.023	0.080	2.560	0.582	43.550	0.003	0.010	99.642	1.257	42.419	99.768
01-JR-MA-221-015	0.018	53.086	0.080	0.000	0.004	0.000	1.346	0.769	44.822	0.012	0.026	100.163	0.209	44.634	100.184
01-JR-MA-221-016	0.047	52.154	0.014	0.023	0.000	0.022	1.620	0.725	44.915	0.000	0.028	99.548	1.729	43.360	99.721

Sample	SiO2	TiO2	Nb2O5	Al2O3	Cr2O3	V2O5	MgO	MnO	FeO*	NiO	ZnO	Total	Fe2O3	FeO	Total
01-JR-MA-227-009	0.027	45.697	0.035	0.587	0.374	0.169	3.717	0.590	46.929	0.072	0.013	98.210	14.226	34.128	99.635
01-JR-MA-238-009	0.027	49.071	0.000	0.000	0.022	0.126	0.268	0.871	48.638	0.000	0.000	99.023	6.267	42.999	99.651
01-JR-MA-238-013	0.057	50.943	0.021	0.016	0.018	0.073	0.268	1.251	45.804	0.000	0.000	98.451	1.703	44.272	98.622
01-JR-MA-246-018	0.005	51.543	0.030	0.019	0.070	0.082	0.150	3.187	44.839	0.018	0.014	99.957	2.051	42.993	100.163
01-JR-MA-246-019	0.026	51.339	0.000	0.130	0.012	0.247	2.570	0.567	44.891	0.007	0.027	99.816	3.876	41.403	100.204
01-JR-MA-246-020	0.023	51.134	0.000	0.116	0.018	0.203	2.191	0.653	45.546	0.000	0.018	99.902	4.220	41.749	100.325
01-JR-MA-246-021	0.027	51.737	0.067	0.004	0.032	0.046	0.338	1.425	46.127	0.003	0.049	99.855	1.686	44.610	100.024
01-JR-MA-253-055	0.029	51.768	0.004	0.053	0.022	0.188	1.727	0.636	44.896	0.004	0.018	99.345	1.944	43.147	99.540
01-JR-MA-253-056	0.047	49.927	0.011	0.022	0.066	0.012	0.205	4.620	44.306	0.012	0.007	99.235	4.873	39.922	99.723
01-JR-MA-253-068	0.029	52.140	0.018	0.089	0.015	0.292	2.221	0.619	44.140	0.000	0.009	99.572	1.478	42.810	99.720
01-JR-MA-253-071	0.027	50.368	0.051	0.005	0.000	0.112	0.072	2.841	46.182	0.000	0.002	99.660	4.036	42.550	100.064
01-JR-MA-253-072	0.017	49.453	0.044	0.012	0.173	0.143	0.225	3.867	45.804	0.011	0.010	99.759	5.975	40.427	100.358
01-JR-MA-253-073	0.009	48.980	0.000	0.000	0.090	0.067	0.201	3.955	45.613	0.005	0.009	98.929	6.477	39.785	99.578
01-JR-MA-253-074	0.007	51.189	0.000	0.030	0.108	0.022	0.118	4.028	44.222	0.000	0.000	99.724	2.709	41.785	99.995
01-JR-MA-254-021	0.026	52.044	0.017	0.003	0.012	0.158	0.056	1.362	46.199	0.009	0.012	99.898	0.664	45.601	99.965
01-JR-MA-254-031	0.058	52.124	0.000	0.055	0.023	0.045	0.625	1.127	45.439	0.000	0.000	99.496	0.757	44.758	99.572
01-JR-MA-256-009	0.022	50.503	0.000	0.143	0.024	0.185	1.901	0.636	46.121	0.013	0.024	99.572	4.949	41.668	100.068
01-JR-SG-001-169	0.036	51.194	0.013	0.000	0.049	0.019	0.380	2.058	45.698	0.015	0.000	99.462	2.612	43.347	99.724
01-JR-SG-007-032	0.010	51.628	0.043	0.000	0.020	0.153	0.090	2.210	45.364	0.002	0.013	99.533	1.166	44.314	99.650
01-JR-SG-010-021	0.037	51.240	0.000	0.114	0.002	0.180	1.560	0.685	45.507	0.008	0.024	99.357	2.893	42.904	99.647
01-JR-SG-010-033	0.022	51.474	0.039	0.021	0.009	0.041	0.422	0.422	47.548	0.019	0.036	100.053	2.619	45.192	100.315
01-JR-TM-002-007	0.027	46.088	0.050	0.005	0.010	0.084	0.159	2.432	50.396	0.007	0.018	99.276	12.782	38.894	100.557
01-JR-TM-003-002	0.056	49.575	0.076	0.027	0.029	0.298	0.072	0.559	49.066	0.010	0.025	99.793	5.103	44.474	100.304
01-JR-TM-004-010	0.013	52.313	0.000	0.008	0.000	0.020	1.094	0.717	45.636	0.000	0.037	99.838	1.395	44.381	99.978
01-JR-TM-004-011	0.019	52.719	0.000	0.066	0.012	0.037	2.633	0.522	43.972	0.000	0.023	100.003	1.916	42.248	100.195
01-JR-TM-004-012	0.029	52.097	0.035	0.064	0.002	0.083	1.767	0.643	45.316	0.016	0.026	100.078	2.337	43.213	100.312
01-JR-TM-004-013	0.046	51.447	0.066	0.007	0.038	0.078	0.205	3.901	44.193	0.001	0.005	99.987	2.224	42.192	100.210
01-JR-TM-004-019	0.032	53.279	0.051	0.019	0.024	0.045	0.112	2.185	44.215	0.000	0.000	99.962	0.000	44.215	99.962
01-JR-TM-005-036	0.039	51.768	0.040	0.088	0.026	0.113	2.865	0.498	43.932	0.009	0.010	99.388	3.043	41.193	99.693
01-JR-TM-005-039	0.043	51.680	0.208	0.017	0.000	0.056	0.030	0.723	46.573	0.000	0.076	99.406	0.653	45.985	99.471
01-JR-TM-005-048	0.044	51.136	0.009	0.011	0.160	0.006	0.128	5.749	42.282	0.018	0.017	99.560	2.566	39.973	99.817
01-JR-TM-005-050	0.041	52.389	0.000	0.063	0.006	0.002	1.452	0.708	44.732	0.009	0.025	99.427	1.005	43.828	99.528
01-JR-TM-005-062	0.038	51.395	0.045	0.072	0.032	0.190	2.133	0.590	44.345	0.000	0.031	98.871	2.400	42.185	99.111
01-JR-TM-007-011	0.022	52.308	0.065	0.033	0.002	0.061	0.792	1.458	45.141	0.000	0.001	99.883	0.888	44.342	99.972
01-JR-TM-008-006	0.014	52.025	0.028	0.084	0.036	0.234	2.728	0.563	43.441	0.000	0.015	99.168	1.873	41.755	99.356

Sample	SiO2	TiO2	Al2O3	Cr2O3	MgO	CaO	MnO	FeO	CoO	NiO	Total	Ni ppm
OLIVINE (KIMBERLITIC)												
01-JR-BD-001-012	41.260	0.013	0.000	0.015	51.782	0.006	0.095	6.337	0.015	0.354	99.877	2782
01-JR-MA-098-005	40.577	0.031	0.006	0.028	48.209	0.023	0.146	10.137	0.018	0.329	99.504	2585
01-JR-MA-142-014	41.210	0.000	0.001	0.007	51.366	0.006	0.096	6.574	0.015	0.401	99.676	3151
01-JR-MA-144-025	41.565	0.017	0.013	0.051	50.371	0.044	0.107	7.617	0.012	0.378	100.175	2978
01-JR-MA-152-005	41.101	0.021	0.001	0.009	50.526	0.001	0.106	7.366	0.016	0.352	99.499	2868
01-JR-MA-162-028	41.193	0.006	0.001	0.001	50.686	0.003	0.111	7.497	0.020	0.360	99.878	2837
01-JR-MA-162-029	40.470	0.018	0.000	0.005	49.682	0.009	0.134	8.370	0.008	0.327	99.023	2845
01-JR-MA-162-031	40.976	0.011	0.030	0.133	49.394	0.093	0.126	9.172	0.017	0.364	100.316	3198
01-JR-MA-167-019	40.785	0.002	0.004	0.003	49.035	0.013	0.144	9.233	0.018	0.397	99.634	2664
01-JR-MA-167-020	41.037	0.018	0.000	0.006	50.191	0.009	0.128	8.436	0.019	0.392	100.236	314
01-JR-MA-172-017	41.289	0.005	0.005	0.017	51.785	0.008	0.092	6.047	0.016	0.372	99.636	440
01-JR-MA-173-014	41.400	0.011	0.000	0.007	51.720	0.004	0.093	6.125	0.013	0.320	99.693	306
01-JR-MA-173-015	41.425	0.006	0.011	0.074	49.872	0.050	0.117	8.200	0.021	0.403	100.179	409
01-JR-MA-179-010	40.953	0.011	0.001	0.013	49.124	0.007	0.114	9.232	0.018	0.393	99.866	361
01-JR-MA-179-011	41.241	0.000	0.002	0.010	51.486	0.005	0.087	6.441	0.014	0.418	99.704	2790
01-JR-MA-179-012	40.019	0.049	0.016	0.008	46.574	0.045	0.145	13.015	0.024	0.244	100.139	3285
01-JR-MA-188-019	40.666	0.018	0.032	0.113	48.979	0.084	0.122	8.918	0.016	0.349	99.297	2743
01-JR-MA-195-021	40.842	0.017	0.022	0.095	49.636	0.082	0.110	8.446	0.019	0.373	99.642	2931
01-JR-MA-201-002	41.508	0.006	0.000	0.009	51.226	0.010	0.097	6.538	0.014	0.378	99.786	2970
01-JR-MA-213-044	41.694	0.000	0.000	0.004	50.506	0.004	0.105	7.675	0.010	0.385	100.383	3025
01-JR-MA-214-056	40.982	0.003	0.020	0.068	49.933	0.068	0.119	8.349	0.023	0.375	99.940	2947
01-JR-MA-214-057	41.528	0.000	0.000	0.015	51.464	0.007	0.102	6.543	0.025	0.346	100.030	2719
01-JR-MA-253-023	41.452	0.002	0.002	0.012	51.464	0.007	0.095	6.614	0.020	0.357	100.025	2805
01-JR-MA-253-024	41.144	0.000	0.002	0.000	50.578	0.007	0.115	7.769	0.018	0.372	100.005	2923
01-JR-MA-256-008	41.173	0.017	0.000	0.008	52.051	0.011	0.104	6.422	0.012	0.325	100.123	2554
01-JR-SG-001-0152	40.638	0.023	0.003	0.018	50.820	0.014	0.099	7.800	0.021	0.378	99.814	2970
01-JR-SG-001-0153	40.963	0.017	0.021	0.035	50.009	0.050	0.109	8.252	0.019	0.405	99.880	3183
01-JR-SG-001-150	40.600	0.024	0.021	0.041	48.098	0.064	0.126	10.486	0.018	0.359	99.837	2821
01-JR-SG-007-006	41.232	0.013	0.000	0.004	50.620	0.005	0.124	7.800	0.020	0.301	100.119	2365
01-JR-SG-008-003	39.979	0.000	0.000	0.001	47.437	0.008	0.162	11.878	0.018	0.356	99.839	2798
01-JR-TM-005-025	41.043	0.010	0.036	0.138	50.152	0.079	0.120	8.028	0.013	0.376	99.995	2955
01-JR-TM-005-027	40.394	0.013	0.000	0.011	48.829	0.009	0.148	9.970	0.020	0.314	99.708	2467
01-JR-TM-005-028	40.601	0.025	0.039	0.063	49.475	0.084	0.114	8.816	0.012	0.386	99.615	3033
01-JR-TM-007-007	41.138	0.000	0.001	0.010	51.030	0.007	0.103	7.204	0.019	0.330	99.842	2593

Appendix I

Metamorphic Massive Sulphide Indicator Mineral Picking Results

Summary List of Abbreviations:

Cpy:	Chalcopyrite	Ky:	Kyanite
Moly:	Molybdenite	Sill:	Sillimanite
Py:	Pyrite	St:	Staurolite
Gth:	Goethite	Sps:	Spessartine
Sp:	Spinel	Fay:	Fayalite
Cr-Diop:	Chrome diopside	Opx:	Orthopyroxene
RedRut:	Red Rutile	Chr:	Chromite
Cor:	Corundum	Mn-Epi:	Manganese Epidote
Uva:	Uvarovite	Cr-Gros:	Chromium Grossular
sap:	Sapphire	Tr:	trace
gr:	grain(s)		

Sample Number	Sulphide/Arsenide and Related Minerals 0.25-0.5 mm				Mg/Mn/Al/Cr Minerals 0.25-0.5 mm													
	>1.0 amp			<1.0 amp	>1.0 amp								>0.8 amp	<0.8 amp				>1.0 amp
	% Cpy	Misc. Prime MMSIMs	% Py	% Oth	# Grains + Colour Spinel	Cr-grossular	low-Cr diopside	Mn-epidote	corundum	% Red Rutile	% Ky	% Sil	% St	% Sps	% Fay	% Opx	% Cr (see KIM data)	Prime Carbonatite Minerals
01-JR-MA-001	0	0	0	0	1 blue-green gahnite	Tr (1gr)	Tr(11gr)	0	0	Tr (2 gr)	60	0	0	Tr	0	Tr	0	0
01-JR-MA-002	Tr (18 gr)	0	Tr (5 gr)	0	4 pale green, pale blue, purple	0	Tr(41gr)	Tr(4gr)	0	0	70	Tr	Tr	Tr	0	0	0	0
01-JR-MA-003	0	Tr molybdenite (1 gr)	0	0	0	0	Tr(12gr)	0	0	0	Tr	0	0	0	0	Tr	0	0
01-JR-MA-004	0	0	0	0	0	0	Tr(12gr)	0	0	Tr (1 gr)	15	Tr	Tr	0	0	0	Tr (1 gr)	0
01-JR-MA-005	0	0	Tr (1 gr)	0	1 grey spinel	0	Tr(21gr)	0	0	Tr (2 gr)	8	0	Tr	0	0	0	0	0
01-JR-MA-006	0	0	0	Tr	0	0	Tr(3gr)	Tr(3gr)	0	Tr (2 gr)	15	0	Tr	0	0	0	0	0
01-JR-MA-007	0	0	0	0	1 pale blue	0	Tr(6gr)	Tr(5gr)	0	Tr (2 gr)	7	0	0	0	0	0	0	0
01-JR-MA-008	0	0	Tr (5 gr)	0	1 pale green gahnite	0	Tr(8gr)	Tr(10gr)	0	Tr (1 gr)	15	0	Tr	0	0	Tr	0	0
01-JR-MA-009	0	0	0	0	0	0	Tr(2gr)	Tr (13gr)	0	Tr (3 gr)	30	0	Tr	0	0	0	0	0
01-JR-MA-010	0	0	0	0	0	0	Tr(30gr)	Tr(3gr)	0	Tr (10 gr)	40	0	Tr	Tr	0	Tr	Tr (~5 gr)	0
01-JR-MA-011	0	0	0	0	0	0	Tr(3gr)	Tr(2gr)	0	Tr (1 gr)	20	0	0	0	0	0	0	0
01-JR-MA-012	0	0	Tr (2 gr)	0	0	0	Tr(3gr)	Tr(5gr)	0	Tr (3 gr)	15	0	Tr	0	0	0	0	0
01-JR-MA-013	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0	0	0	0
01-JR-MA-014	0	Tr molybdenite (1 gr)	Tr (10 gr)	0	1 grey	0	Tr(28gr)	0	0	Tr (10 gr)	5	0	Tr	0	0	0	Tr (4 gr)	0
01-JR-MA-015	0	0	Tr (5 gr)	0	0	0	Tr(11gr)	Tr(4gr)	0	Tr (1 gr)	8	0	Tr	0	0	0	Tr (~6 gr)	0

	Sulphide/Arsenide and Related Minerals 0.25-0.5 mm				Mg/Mn/Al/Cr Minerals 0.25-0.5 mm													
	>1.0 amp			<1.0 amp	>1.0 amp								>0.8 amp	<0.8 amp				>1.0 amp
Sample Number	% Cpy	Misc. Prime MMSIMs	% Py	% Gth	# Grains + Colour Spinel	Cr-grossular	low-Cr diopside	Mn-epidote	corundum	% Red Rutile	% Ky	% Sil	% St	% Sps	% Fay	% Opx	% Cr (see KIM data)	Prime Carbonate Minerals
01-JR-MA-016	0	Tr molybdenite (1 gr)	0	0	0	0	Tr(13gr)	Tr(2gr)	0	Tr (5 gr)	10	0	Tr	0	0	0	0	0
01-JR-MA-017	0	0	Tr (3 gr)	0	1 pale blue	0	Tr(10gr)	Tr(8gr)	0	0	8	0	0	0	0	0	0	0
01-JR-MA-018	0	0	Tr (3 gr)	0	0	0	Tr(8gr)	Tr(5gr)	0	Tr (1 gr)	7	0	Tr	0	0	0	0	0
01-JR-MA-019	Tr (1 gr)	0	Tr (5 gr)	0	0	0	Tr(3gr)	0	0	0	10	Tr	Tr	0	0	0	0	0
01-JR-MA-020	0	0	Tr (2 gr)	0	0	0	Tr(5gr)	0	0	0	3	Tr	Tr	0	0	0	0	0
01-JR-MA-021	0	0	Tr (5 gr)	Tr	0	0	Tr(4gr)	0	0	Tr (4 gr)	2	Tr	0	0	0	0	0	0
01-JR-MA-023	0	0	Tr (~30 gr)	Tr	0	0	Tr(7gr)	0	0	Tr (1 gr)	2	Tr	0	0	0	0	Tr (3 gr)	0
01-JR-MA-025	0	0	Tr (~75 gr)	0	0	0	0	0	0	0	0	0	Tr	0	0	0	Tr (1 gr)	0
01-JR-MA-027	0	0	0	0	0	0	Tr(8gr)	Tr(9gr)	0	0	8	Tr	Tr	0	0	0	0	0
01-JR-MA-028	0	0	Tr (5 gr)	Tr	0	0	Tr(4gr)	Tr(4gr)	0	0	10	Tr	Tr	0	0	0	0	0
01-JR-MA-029	0	0	Tr (10 gr)	Tr	5 grey blue	0	Tr(2gr)	Tr(2gr)	0	Tr (3 gr)	8	0	Tr	0	0	0	Tr (~15 gr)	0
01-JR-MA-030	0	0	0	0	0	0	Tr(3gr)	Tr(2gr)	0	Tr (3 gr)	7	Tr	0	0	0	0	0	0
01-JR-MA-031	0	0	0	0	0	0	Tr(3gr)	Tr(1gr)	0	0	5	Tr	0	0	0	0	0	0
01-JR-MA-032	0	0	Tr (~20 gr)	0	1 pale blue-green	0	Tr(5gr)	Tr(1gr)	0	Tr (2 gr)	8	Tr	0	0	0	0	0	0
01-JR-MA-033	0	0	Tr (~25 gr)	0	0	0	Tr(6gr)	Tr(6gr)	0	Tr (2 gr)	15	Tr	Tr	0	0	0	Tr (~25 gr)	0
01-JR-MA-034	0	Tr molybdenite (1 gr)	Tr (~25 gr)	0	0	0	Tr(4gr)	Tr(6gr)	0	Tr (1 gr)	20	0	0	0	0	0	0	0

Sample Number	Sulphide/Arsenide and Related Minerals 0.25-0.5 mm				Mg/Mn/Al/Cr Minerals 0.25-0.5 mm													
	>1.0 mm			<1.0 mm	>1.0 mm								>0.8 mm	<0.8 mm				>1.0 mm
	% Cpy	Misc. Prime MMSIMs	% Py	% Gth	# Grains + Colour Spinel	Cr-pyrope	low-Cr diopside	Mn-epidote	corundum	% Red Rutile	% Ky	% Sil	% St	% Sps	% Fay	% Opx	% Cr (see EIM data)	Prime Carbonatite Minerals
01-JR-MA-035	0	0	Tr (5 gr)	0	1 bue-green	0	Tr(3gr)	0	0	0	3	0	Tr	0	0	0	0	0
01-JR-MA-036	0	0	0	0	0	0	Tr(5gr)	Tr(6gr)	0	0	60	0	0	0	0	0	Tr (1 gr)	0
01-JR-MA-037	Tr (1 gr)	0	0	0	0	0	0	0	0	0	15	Tr	0	0	0	0	0	0
01-JR-MA-038	0	0	0	0	0	0	Tr(5gr)	Tr(1gr)	0	0	12	0.5	Tr	0	0	0	0	0
01-JR-MA-039	0	0	0	0	0	0	Tr(3gr)	Tr(5gr)	0	0	8	Tr	Tr	0	0	0	0	0
01-JR-MA-040	0	0	Tr (10 gr)	Tr	0	0	Tr(10gr)	Tr(7gr)	0	Tr (20 gr)	20	Tr	Tr	0	0	0	Tr (4 gr)	0
01-JR-MA-041	0	0	Tr (3 gr)	Tr	0	0	Tr(7gr)	Tr(30gr)	0	0	15	Tr	0	0	0	0	0	0
01-JR-MA-042	0	0	Tr (1 gr)	0	0	0	Tr(9gr)	Tr(13gr)	0	0	15	0.5	0	0	0	0	0	0
01-JR-MA-043	0	0	Tr (~30 gr)	0	0	0	Tr(6gr)	Tr(10gr)	0	Tr (2 gr)	15	0	0	0	0	0	0	0
01-JR-MA-044	0	0	0	0	0	0	0	0	0	Tr (1 gr)	70	0	0	Tr	0	0	0	0
01-JR-MA-045	0	Tr molybdenite (1 gr)	Tr (2 gr)	0	0	0	Tr(1gr)	0	0	0	3	0	0	0	0	Tr	0	0
01-JR-MA-046	0	0	Tr (5 gr)	0	0	0	Tr(1gr)	Tr(4gr)	0	Tr (1 gr)	15	0	0	0	0	0	0	0
01-JR-MA-047	0	0	Tr (3 gr)	0	0	0	0	0	0	0	Tr	0	0	0	0	0	0	0
01-JR-MA-048	0	0	0.3 (~300 gr)	0	0	0	Tr(2gr)	Tr(15gr)	0	0	15	0	Tr	0	0	0	0	0
01-JR-MA-049	0	0	0.3 (~100 gr)	0	0	0	Tr(1gr)	0	0	Tr (1 gr)	17	0	Tr	Tr	0	Tr	0	0
01-JR-MA-050	0	Tr molybdenite (4 gr)	0	0	0	0	0	0	0	0	Tr	0	0	0	0	0	0	0

Sample Number	Sulphide/Arsenide and Related Minerals 0.25-0.5 mm				Mg/Mn/Al/Cr Minerals 0.25-0.5 mm													
	>1.0 amp			<1.0 amp	>1.0 amp								>0.8 amp	<0.8 amp				>1.0 amp
	% Cpy	Misc. Prime MMSIMs	% Py	% Gth	# Grains + Colour Spinel	Cr-grossular	low-Cr diopside	Mn-epidote	corundum	% Red Rutile	% Ky	% Sil	% St	% Sps	% Fay	% Ttn	% Cr-(not KIM) [illegible]	Prime Carbonate Minerals
01-JR-MA-051	0	Tr molybdenite (1 gr)	0	0	0	0	Tr(12gr)	Tr(40gr)	0	Tr (1 gr)	15	0	Tr	Tr	0	0	0	0
01-JR-MA-052	0	0	Tr (~15 gr)	Tr	0	Tr(1gr)	0	Tr(1gr)	0	Tr (3 gr)	1	0	0	0	0	0	Tr (1 gr)	0
01-JR-MA-053	0	Tr molybdenite (1 gr)	Tr (10 gr)	0	0	0	0	Tr(1gr)		0	3	0	Tr	0	0	0	Tr (1 gr)	0
01-JR-MA-054	0	0	0	0	0	0	0		0	0	1	0	Tr	Tr	0	Tr	0	0
01-JR-MA-055	0	Tr molybdenite (3 gr)	0.5 (~200 gr)	0	0	0	Tr(1gr)	0	0	0	8	0	Tr	Tr	0	0	Tr (2 gr)	0
01-JR-MA-056	0	Tr molybdenite (2 gr)	0	0	0	0	Tr(2gr)	Tr(5gr)	0	0	3	0	Tr	0	0	0	0	0
01-JR-MA-057	0	Tr molybdenite (2 gr)	0	0	0	0	Tr(1gr)	Tr(1gr)	0	0	3	0	Tr	0	0	0	0	0
01-JR-MA-058	0	0	Tr (~100 gr)	0	0	0	Tr(5gr)	Tr(4gr)	Tr(1gr)	Tr (3 gr)	5	0	Tr	Tr	0	0	Tr (~10 gr)	0
01-JR-MA-059	0	0	Tr (~15 gr)	Tr	0	0	Tr(3gr)	Tr(4gr)	0	Tr (7 gr)	3	0	1	Tr	0	Tr	Tr (2 gr)	0
01-JR-MA-060	0	0	0	0	0	0	Tr(3gr)	Tr(2gr)	0	0	0.5	0	Tr	Tr	0	0	0	0
01-JR-MA-061	0	0	0	0	0	0	0	0	0	0	Tr	0	Tr	0	0	0	0	0
01-JR-MA-062	0	0	0	0	0	0	0	0	0	Tr (2 gr)	3	0	Tr	0	0	0	0	0
01-JR-MA-063	0	Tr molybdenite (1 gr)	0	0	0	0	Tr(6gr)	0	0	0	25	0	Tr	0	0	Tr	Tr (1 gr)	0
01-JR-MA-064	0	0	0	0	0	0	Tr(25gr)	Tr(6gr)	0	0	2	0	0	0	0	Tr	0	0
01-JR-MA-065	0	0	0	0	0	0	Tr(2gr)	Tr(2gr)	0	0	5	0	Tr	0	0	Tr	0	0

	[illegible] Arsenide and Related Minerals 0.25-0.5 mm				[illegible] Minerals 0.25-0.5 mm													
	>1.0 mm			<1.0 mm	>1.0 mm								[illegible]	[illegible]				[illegible]
Sample Number	% Cpy	Misc. Prims [illegible]	% Py	% Gln	# Grains + Colour Spinel	Cr [illegible]	Low-Cr diopside	[illegible]	corundum	% Red Rutile	% Ky	% [illegible]	% [illegible]	% [illegible]	% [illegible]	% [illegible]	% [illegible]	[illegible]
01-JR-MA-066	0	0	0	0	0	0	Tr(2gr)	Tr(3gr)	0	Tr (1 gr)	3	Tr	Tr	Tr	0	0	0	0
01-JR-MA-067	0	Tr molybdenite (2 gr)	0	0	0	0	0	0	0	Tr (1 gr)	5	0	Tr	0	0	Tr	0	0
01-JR-MA-068	0	0	0	0	0	0	Tr(9gr)	Tr(4gr)	0	0	5	Tr	Tr	Tr	0	Tr	0	0
01-JR-MA-069	0	0	0	0	0	0	Tr(1gr)	Tr(1gr)	0	0	4	Tr	Tr	0	0	Tr	0	0
01-JR-MA-070	0	0	0	0	0	0	Tr(1gr)	0	0	Tr (2 gr)	5	Tr	0	0	0	Tr	0	0
01-JR-MA-071	0	0	Tr (~15 gr)	0	0	0	Tr(1gr)	Tr(2gr)	0	0	8	Tr	0	0	0	Tr	0	0
01-JR-MA-072	0	Tr molybdenite (1 gr)	0	Tr	1 green	0	0	0	0	0	70	Tr	Tr	0	0	Tr	0	0
01-JR-MA-073	0	0	Tr (~15 gr)	0	0	0	Tr(2gr)	0	0	Tr (21 gr)	20	Tr	Tr	0	0	Tr	Tr (~70 gr)	0
01-JR-MA-074	0	0	Tr (10 gr)	0	1 grey	0	Tr(6gr)	Tr(9gr)	Tr(3gr)	Tr (14 gr)	2	0	3	0	0	2	Tr (~30 gr)	0
01-JR-MA-075	Tr (1 gr)	0	Tr (~20 gr)	0	0	Tr(1gr)	Tr(9gr)	Tr(8gr)	0	0	20	Tr	Tr	0	0	Tr	Tr (~20 gr)	0
01-JR-MA-076	0	0	0	0	0	0	Tr(4gr)	Tr(2gr)	0	0	5	0	Tr	0	0	Tr	Tr (2 gr)	0
01-JR-MA-077	Tr (2 gr)	0	0.5 (~300 gr)	0	0	0	Tr(6gr)	Tr(7gr)	0	0	80	Tr	Tr	0	0	0	0	0
01-JR-MA-078	0	0	0	0	0	0	Tr(1gr)	Tr(8gr)	0	Tr (6 gr)	60	0	Tr	0	0	0	0	0
01-JR-MA-079	0	Tr molybdenite (2 gr)	0	0	2 pale blue	0	Tr(13gr)	Tr(10gr)	0	Tr (7 gr)	7	Tr	Tr	Tr	0	0	0	0
01-JR-MA-080	0	0	0	0	0	0	Tr(2gr)	0	0	0	5	Tr	0	0	0	0	0	0

Sample Number	Sulphide/Arsenide and Related Minerals 0.25-0.5 mm				Mg/Mn/Al/Cr Minerals 0.25-0.5 mm													
	>1.0 amp			<1.0 amp	>1.0 amp								>0.8 amp	<0.8 amp				>1.0 amp
	% Cpy	Misc. Prime MMSIMs	% Py	% Gth	# Grains + Colour Spinel	Cr-grossular	low-Cr diopside	Mn-epidote	corundum	% Red Rutile	% Ky	% Sil	% St	% Spn	% Fay	% Opx	% Cr ([illegible])	Prime Carbonatite Minerals
01-JR-MA-081	0	Tr molybdenite (1 gr)	0	0	0	0	0	Tr(2gr)	0	0	5	Tr	0	0	0	Tr	0	0
01-JR-MA-082	0	Tr molybdenite (2 gr)	0	0	1 blue	0	0	Tr(3gr)	0	Tr (29 gr)	8	Tr	0	0	0	0	Tr (2 gr)	0
01-JR-MA-083	0	0	0	0	0	0	Tr(5gr)	Tr(4gr)	0	0	8	Tr	0	0	0	0	0	0
01-JR-MA-084	0	0	0	0	0	0	Tr(2gr)	Tr(3gr)	0	Tr (1 gr)	7	0	Tr	Tr	0	Tr	0	0
01-JR-MA-085	0	0	0	0	0	0	Tr(2gr)	Tr(5gr)	0	0	70	0	0	Tr	0	Tr	0	0
01-JR-MA-086	0	0	0	0	0	0	0	Tr(1gr)	0	0	75	0	0	Tr	0	Tr	0	0
01-JR-MA-087	0	0	0	0	0	0	Tr(14gr)	Tr(14gr)	0	0	50	0	0	Tr	0	Tr	0	0
01-JR-MA-088	0	0	0	0	3 blue, green	0	Tr(13gr)	Tr(2gr)	0	Tr (~40 gr)	70	0	0	Tr	0	0	Tr (1 gr)	0
01-JR-MA-089	0	0	0	0	0	0	Tr(2gr)	Tr(1gr)	0	0	5	Tr	2	0	0	0	0	0
01-JR-MA-090	0	0	Tr (5 gr)	0	0	0	Tr(1gr)	Tr(1gr)	0	0	20	Tr	Tr	0	0	0	0	0
01-JR-MA-091	0	0	0	0	0	0	Tr(1gr)	Tr(2gr)	0	0	10	Tr	Tr	0	0	0	0	0
01-JR-MA-092	0	0	Tr (5 gr)	0	1 pale blue	0	Tr(2gr)	Tr(1gr)	0	0	3	Tr	0	Tr	0	0	0	0
01-JR-MA-093	0	0	0	0	0	0	Tr(9gr)	0	0	0	4	Tr	Tr	0	0	0	0	0
01-JR-MA-094	0	0	Tr (10 gr)	0	2 pale blue	0	Tr(3gr)	0	Tr(1gr)	0	3	Tr	Tr	0	0	0	0	0
01-JR-MA-095	0	Tr molybdenite (1 gr)	0	0	1 blue-green	0	Tr(3gr)	0	0	0	2	Tr	Tr	0	0	0	0	0
01-JR-MA-096	Tr (1 gr)	0	0	0	0	0	Tr(1gr)	Tr(1gr)	0	0	Tr	Tr	3	0	0	0	0	0
01-JR-MA-097	0	0	Tr (3 gr)	0	1 dark green gahnite	0	Tr(1gr)	Tr(2gr)	0	0	2	0	Tr	Tr	0	Tr	Tr (~100 gr)	0
01-JR-MA-098	Tr (1 gr)	0	Tr (8 gr)	0	0	0	Tr(2gr)	Tr(2gr)	0	0	2	Tr	15	Tr	0	Tr	Tr (14 gr)	0

Sample Number	Sulphide/Arsenide and Related Minerals 0.25-0.5 mm				Mg/Mn/Al/Cr Minerals 0.25-0.5 mm													
	>1.0 mm			<1.0 mm	>1.0 mm								>0.8 mm	<0.8 mm				>1.0 mm
	% Cpy	Misc. Prime MMSIMs	% Py	% Gth	# Grains + Colour Spinel	Cr-grossular	low-Cr diopside	Mn-epidote	corundum	% Red Rutile	% Ky	% Sil	% St	% Sps	% Fay	% Opx	% Cr (see KIM data)	Prime Carbonatite Minerals
01-JR-MA-099	0	0	Tr (3 gr)	0	0	0	Tr(3gr)	Tr(1gr)	0	0	Tr	0	15	0	0	0	0	0
01-JR-MA-100	Tr (1 gr)	0	Tr (~50 gr)	Tr	1 green gahnite	0	Tr(15gr)	0	0	Tr (4 gr)	1	0	2	0	0	0	Tr (3 gr)	0
01-JR-MA-101	0	0	Tr (10 gr)	0	0	0	0	0	0	0	1	0	2	0	0	0	0	0
01-JR-MA-102	0	0	Tr (8 gr)	0	0	0	Tr(3gr)	0	0	0	1	0	10	Tr	0	Tr	Tr (4 gr)	0
01-JR-MA-103	0	0	0	0	0	0	Tr(1gr)	0	0	0	15	0	Tr	Tr	0	Tr	0	0
01-JR-MA-104	0	0	0	0	1 grey	0	Tr(7gr)	Tr(8gr)	0	0	15	0	Tr	Tr	0	0	0	0
01-JR-MA-105	0	0	0	0	0	0	Tr(1gr)	Tr(6gr)	0	0	15	0	Tr	Tr	0	0	0	0
01-JR-MA-106	0	0	Tr (5 gr)	0	0	0	Tr(12gr)	Tr(11gr)	0	Tr (~40 gr)	75	Tr	Tr	Tr	0	0	0	0
01-JR-MA-107	Tr (1 gr)	0	0	0	0	0	Tr(4gr)	Tr(25gr)	0	0	25	0	Tr	Tr	0	Tr	0	0
01-JR-MA-108	0	0	0.5 (~150 gr)	0	0	0	Tr(5gr)	Tr(5gr)	0	0	15	0	Tr	0	0	0	0	0
01-JR-MA-109	0	0	0	0	0	0	Tr(5gr)	Tr(28gr)	0	0	15	Tr	Tr	0	0	0	0	0
01-JR-MA-110	0	0	Tr (5 gr)	0	0	0	Tr(4gr)	Tr(8gr)	0	Tr (2 gr)	12	0	Tr	0	0	0	0	0
01-JR-MA-111	0	0	Tr (2 gr)	0	0	0	Tr(5gr)	Tr(12gr)	0	0	25	0	Tr	Tr	0	Tr	Tr (1 gr)	0
01-JR-MA-112	Tr (22 gr)	0	Tr (~20 gr)	0	0	0	Tr(2gr)	Tr(2gr)	0	Tr (7 gr)	1	0	Tr	0	0	0	Tr (1 gr)	0
01-JR-MA-113	0	0	0	0	0	0	Tr(4gr)	Tr(2gr)	0	0	7	0	Tr	0	0	0	0	0
01-JR-MA-114	0	0	0	0	0	0	Tr(13gr)	Tr(3gr)	0	0	7	0	0	0	0	Tr	0	0
01-JR-MA-115	0	0	0	0	0	0	Tr(2gr)	0	0	Tr (3 gr)	90	0	0	0	0	0	0	0
01-JR-MA-116	0	0	0	0	0	0	Tr(3gr)	Tr(4gr)	0	Tr (1 gr)	15	0	0	0	0	0	0	0

	Sulphide/Arsenide and Related Minerals 0.25-0.5 mm				Mg/Mn/Al/Cr Minerals 0.25-0.5 mm													
	>1.0 amp			<1.0 amp	>1.0 amp								>0.8 amp	<0.8 amp				>1.0 amp
Sample Number	% Cpy	Misc. Prime MMSIMs	% Py	% Gth	# Grains + Colour Spinel	Cr-grossular	low-Cr diopside	Mn-epidote	corundum	% Red Rutile	% Ky	% Sil	% St	% Sps	% Fay	% Ogn	% Cr (see KIM data)	Prime Carbonate Minerals
01-JR-MA-117	0	Tr molybdenite (1 gr)	Tr (2 gr)	Tr	0	0	0	Tr(10gr)	0	Tr (2 gr)	20	0	Tr	Tr	0	Tr	0	0
01-JR-MA-118	0	0	0	0	1 blue-green gahnite	0	Tr(2gr)	Tr(3gr)	0	Tr (2 gr)	4	0	Tr	0	0	Tr	0	0
01-JR-MA-119	0	0	0	0	0	0	Tr(1gr)	0	0	0	40	0	0	0	0	0	0	0
01-JR-MA-120	0	0	0	0	0	0	Tr(11gr)	Tr(9gr)	0	Tr (14 gr)	50	0	Tr	0	0	Tr	0	0
01-JR-MA-121	0	0	0	0	0	0	0	Tr(5gr)	0	0	15	0	0	0	0	0	0	0
01-JR-MA-122	0	0	0	0	0	0	0	0	0	0	25	Tr	Tr	0	0	Tr	0	0
01-JR-MA-123	0	0	Tr (10 gr)	0	1 blue-green gahnite	0	Tr(9gr)	0	0	Tr (12 gr)	2	Tr	4	Tr	0	2	Tr (~50 gr)	0
01-JR-MA-124	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0
01-JR-MA-125	0	Tr molybdenite (1 gr)	Tr (2 gr)	0	0	0	Tr(1gr)	0	0	0	Tr	0	0.5	Tr	0	Tr	0	0
01-JR-MA-126	0	Tr molybdenite (1 gr)	Tr (~20 gr)	0	1 green gahnite	0	Tr(5gr)	Tr(5gr)	0	0	5	Tr	3	0	0	0	Tr (~60 gr)	0
01-JR-MA-127	0	0	0	0	0	0	0	0	0	0	Tr	0	Tr	0	0	0	0	0
01-JR-MA-128	0	0	Tr (2 gr)	0	0	0	Tr(2gr)	0	0	0	3	0	0	0	0	Tr	0	0
01-JR-MA-129	Tr (2 gr)	0	Tr (8 gr)	Tr	2 blue-green gahnite; 1 pale purple spinel	Tr(2gr)	Tr(5gr)	Tr(6gr)	0	Tr (9 gr)	10	0	1	Tr	0	Tr	0	0
01-JR-MA-130	0	0	0	0	0	0	Tr(4gr)	Tr(7gr)	0	Tr (1 gr)	2	0	1	Tr	0	Tr	0	0
01-JR-MA-131	0	0	Tr (10 gr)	0	0	0	Tr(5gr)	Tr(11gr)	0	0	4	0	Tr	Tr	0	Tr	0	0
01-JR-MA-132	0	0	Tr (~15 gr)	0	0	0	Tr(1gr)	0	Tr(1gr)	Tr (1 gr)	Tr	0	2	Tr	0	1	Tr (22 gr)	0

	Sulphide/Arsenide and Related Minerals 0.25-0.5 mm				Mg/Mn/Al/Cr Minerals 0.25-0.5 mm													
	>1.0 amp			<1.0 amp	>1.0 amp								>0.8 amp	<0.8 amp				>1.0 amp
Sample Number	% Cpy	Misc. Prime MMSIMs	% Py	% Gth	# Grains + Colour Spinel	Cr-grossular	low-Cr diopside	Mn-epidote	corundum	% Red Rutile	% Ky	% Sil	% St	% Sps	% Fay	% Opx	% Cr (see KIM data)	Prime Carbonate Minerals
01-JR-MA-133	0	0	Tr (8 gr)	0	0	0	0	0	0	0	Tr	0	Tr	0	0	0	0	0
01-JR-MA-134	0	0	0	0	0	0	Tr(1gr)	0	0	Tr (1 gr)	Tr	0	Tr	0	0	Tr	Tr (~150 gr)	0
01-JR-MA-135	Tr (3 gr)	0	Tr (~20 gr)	Tr	0	0	Tr(22gr)	0	0	Tr (11 gr)	3	0	3	Tr	0	Tr	Tr (~100 gr)	0
01-JR-MA-136	0	0	Tr (5 gr)	0	0	0	Tr(3gr)	0	0	0	0.5	Tr	5	Tr	0	0	0	0
01-JR-TM-001	0	0	Tr (2 gr)	0	0	0	Tr(14gr)	Tr(2gr)	0	Tr (2 gr)	20	0	Tr	0	0	0	0	0
01-JR-MA-137	0	0	0	0	0	0	Tr(1gr)	0	0	0	0	0	Tr	0	Tr	0	0	0
01-JR-MA-138	0	0	Tr (1 gr)	0	0	0	0	0	0	0	0	0	1	0	Tr	0	Tr (2 gr)	0
01-JR-MA-139	0	0	0	0	0	0	Tr(2gr)	0	0	0	0	0	Tr	0	Tr	0	Tr (6 gr)	0
01-JR-MA-140	0	0	0	Tr	0	0	Tr(2gr)	0	0	0	0	0	Tr	Tr	15	Tr	0	0
01-JR-MA-141	0	0	0	0	0	0	Tr(5gr)	0	0	0	0	0	5	Tr	10	Tr	0	0
01-JR-MA-142	Tr (2 gr)	0	Tr (~20 gr)	Tr	0	0	Tr(8gr)	0	0	0	0	0	Tr	Tr	1	0	Tr (6 gr)	0
01-JR-MA-143	0	0	0	0	0	0	Tr(2gr)	0	0	0	Tr	Tr	Tr	0	0	Tr	0	0
01-JR-MA-144	Tr (5 gr)	0	0	0	0	0	Tr(7gr)	0	0	0	0	Tr	0.5	0	0	Tr	0	0
01-JR-MA-145	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	Tr (2 gr)	0
01-JR-MA-146	0	0	0	0	0	0	Tr(1gr)	0	0	0	0	0	Tr	0	0	4	0	0
01-JR-MA-147	0	0	Tr (~50 gr)	Tr	0	0	Tr(10gr)	0	0	0	0	Tr	0	0	0	15	Tr (5 gr)	0
01-JR-MA-148	0	0	Tr (1 gr)	0	0	0	Tr(1gr)	0	0	0	Tr	0	1	0	0	7	0	0
01-JR-MA-149	0	0	Tr (10 gr)	Tr	0	0	Tr(2gr)	0	0	0	0	0	Tr	0	0	0	Tr (2 gr)	0

Sample Number	Sulphide/Arsenide and Related Minerals 0.25-0.5 mm				Mg/Mn/Al/Cr Minerals 0.25-0.5 mm													
	>1.0 amp			<1.0 amp	>1.0 amp								>0.8 amp	<0.8 amp				>1.0 amp
	% Cpy	Misc. Prime MMSIMs	% Py	% Gth	# Grains + Colour Spinel	Cr-grossular	low-Cr diopside	Mn-epidote	corundum	% Red Rutile	% Ky	% Sil	% St	% Sps	% Fay	% Opx	% Cr (see KIM data)	Prime Carbonate Minerals
01-JR-MA-150	Tr (1 gr)	0	Tr (~20 gr)	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
01-JR-MA-151	Tr (10 gr)	Tr arsenopyrite (1 gr)	10 (~3000 gr)	Tr	0	0	Tr(4gr)	0	0	0	Tr	0	2	0	0	1	Tr (4 gr)	0
01-JR-MA-152	Tr (3 gr)	0	Tr (~20 gr)	0	0	0	Tr(1gr)	0	0	0	0	0	4	0	0	0	0	0
01-JR-MA-153	0	0	0	Tr	0	0	Tr(1gr)	0	0	0	0	0	2	0	0	0	Tr (1 gr)	0
01-JR-MA-154	0	0	Tr (1 gr)	0	0	0	0	0	0	0	0	0	1	Tr	0	0	0	0
01-JR-MA-155	0	0	Tr (2 gr)	0	0	0	0	0	0	0	0	0	Tr	0	0	Tr	0	0
01-JR-MA-156	Tr (1 gr)	0	Tr (5 gr)	Tr	0	0	Tr(3gr)	0	0	0	0	0	8	Tr	0	Tr	Tr (1 gr)	0
01-JR-MA-157	Tr (1 gr)	0	Tr (4 gr)	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
01-JR-MA-158	0	0	0	0	0	0	Tr(5gr)	0	0	0	0	Tr	10	0	0	Tr	Tr (1 gr)	0
01-JR-MA-159	0	Tr molybdenite (1 gr)	Tr (5 gr)	0	0	0	0	0	0	0	0	0	Tr	0	0	0	Tr (1 gr)	0
01-JR-MA-160	0	Tr molybdenite (4 gr)	Tr (~100 gr)	0	0	0	Tr(1gr)	0	0	0	0	0	Tr	0	0	0	0	0
01-JR-MA-161	0	Tr molybdenite (2 gr)	0	Tr	0	0	0	0	0	0	0	0	Tr	Tr	0	0	0	0
01-JR-MA-162	Tr (12 gr)	0	0	0	0	0	Tr(15gr)	0	Tr(1gr)	0	0	0	Tr	Tr	0	Tr	Tr (1 gr)	0
01-JR-MA-163	0	0	0	1	0	0	Tr(3gr)	0	0	0	0	Tr	0.5	0	0	4	0	0
01-JR-MA-164	0	0	Tr (2 gr)	0	0	0	0	0	0	0	0	Tr	1	0	0	2	0	0

	Sulphide/Arsenide and Related Minerals 0.25-0.5 mm				Mg/Mn/Al/Cr Minerals 0.25-0.5 mm													
	>1.0 amp			<1.0 amp	>1.0 amp								>0.8 amp	<0.8 amp				>1.0 amp
Sample Number	% Cpy	Misc. Prime MMSIMs	% Py	% Gth	# Grains + Colour Spinel	Cr-grossular	low-Cr diopside	Mn-epidote	corundum	% Red Rutile	% Ky	% Sil	% St	% Sps	% Fay	% Opx	% Cr (see KIM data)	Prime Carbonatite Minerals
01-JR-MA-165	Tr (1 gr)	0	0	2	0	0	Tr(18gr)	0	0	0	Tr	Tr	1	Tr	0	3	Tr (~100 gr)	0
01-JR-MA-166	0	0	0	0	0	0	0	0	0	0	0	Tr	1	0	0	2	Tr (1 gr)	0
01-JR-MA-167	0	0	0	0	1 pale blue	0	Tr(4gr)	0	0	0	0	0	4	Tr	0	3	Tr (8 gr)	0
01-JR-MA-168	0	0	0	0	0	0	Tr(2gr)	0	0	0	0	Tr	Tr	0	0	1	Tr (1 gr)	0
01-JR-MA-169	0	0	0	Tr	0	0	0	0	0	0	0	Tr	Tr	0	0	Tr	Tr (4 gr)	0
01-JR-MA-170	0	0	0	Tr	0	0	0	0	0	0	0	Tr	5	0	0	Tr	Tr (1 gr)	0
01-JR-MA-171	0	0	0	3	0	0	Tr(2gr)	0	0	0	0	Tr	Tr	0	0	2	0	0
01-JR-MA-172	Tr (~50 gr)	Tr silver (2 gr) Tr bismuthinite (8 gr) Tr arsenopyrite (3 gr) Tr loellingite (4 gr) Tr skutterudite (5 gr) Tr arsenopyrite/ loellingite/ skutterudite (~75 gr)	Tr (~25 gr)	0.5	0	0	Tr(2gr)	0	0	0	0	Tr	4	0	0	Tr	Tr (3 gr)	0
01-JR-MA-173	Tr (1 gr)	0	Tr (~25 gr)	Tr	0	0	Tr(1gr)	0	0	0	0	Tr	4	Tr	0	Tr	Tr (13 gr)	0

Sample Number	Sulphide/Arsenide and Related Minerals 0.25-0.5 mm				Mg/Mn/Al/Cr Minerals 0.25-0.5 mm													
	>1.0 amp			<1.0 amp	>1.0 amp								>0.8 amp	<0.8 amp				>1.0 amp
	% Cpy	Misc. Prime MMSIMs	% Py	% Gth	# Grains + Colour Spinel	Cr-grossular	low-Cr diopside	Mn-epidote	corundum	% Red Rutile	% Ky	% Sil	% St	% Sps	% Fay	% Opx	% Cr (see KIM data)	Prime Carbonate Minerals
01-JR-MA-174	0	Tr arsenopyrite (2 gr)	Tr (~25 gr)	Tr	0	0	Tr(6gr)	0	0	0	Tr	Tr	7	Tr	0	Tr	Tr (6 gr)	0
01-JR-MA-175	0	0	Tr (5 gr)	Tr	0	0	Tr(4gr)	0	0	0	0	Tr	5	0	0	Tr	0	0
01-JR-MA-176	0	0	Tr (2 gr)	Tr	0	0	Tr(2gr)	0	0	0	0	Tr	1	0	0	Tr	0	0
01-JR-MA-177	0	0	Tr (2 gr)	Tr	0	0	Tr(1gr)	0	0	0	0	0	2	0	0	3	0	0
01-JR-MA-178	0	0	5 (~15 gr)	1	0	0	Tr(2gr)	0	0	0	0	0	3	0	0	2	0	0
01-JR-MA-179	0	0	Tr (~15 gr)	Tr	0	0	Tr(5gr)	0	0	0	0	0	4	0	0	1	Tr (1 gr)	0
01-JR-MA-180	Tr (2 gr)	Tr arsenopyrite (1 gr)	1 (~300 gr)	Tr	0	0	Tr(18gr)	0	0	0	0	Tr	12	0	0	Tr	Tr (9 gr)	0
01-JR-MA-181	Tr (11 gr)	0	Tr (~60 gr)	Tr	0	0	Tr(7gr)	0	0	0	0	Tr	Tr	0	0	Tr	Tr (3 gr)	0
01-JR-MA-182	Tr (1 gr)	0	1 (~400 gr)	Tr	0	0	0	0	0	0	Tr	Tr	3	Tr	0	Tr	Tr (5 gr)	0
01-JR-MA-183	0	0	0.5 (~60 gr)	0	0	0	Tr(1gr)	0	0	0	Tr	0	5	0	0	0	Tr (10 gr)	0
01-JR-MA-184	Tr (11 gr)	0	1 (~200 gr)	Tr	0	0	0	0	0	0	0	0	Tr	0	Tr	0	0	0
01-JR-MA-185	0	0	Tr (3 gr)	0	0	0	Tr(2gr)	0	0	0	0	0	3	0	0.5	Tr	0	0
01-JR-MA-186	0	0	0	0	0	0	0	0	0	0	0	0	2	Tr	3	Tr	0	0
01-JR-MA-187	0	0	Tr (5 gr)	0	0	0	0	0	0	0	Tr	0	8	0	10	0	Tr (3 gr)	0
01-JR-MA-188	Tr (1 gr)	0	Tr (~20 gr)	Tr	0	0	Tr(4gr)	0	0	Tr (1 gr)	0	0	4	Tr	40	Tr	Tr (4 gr)	0
01-JR-MA-189	0	0	Tr (~15 gr)	Tr	1 blue-green gahnite	0	Tr(4gr)	0	0	0	Tr	0	15	0	15	0	0	0

	Sulphide/Arsenide and Related Minerals 0.25-0.5 mm				Mg/Mn/Al/Cr Minerals 0.25-0.5 mm													
	>1.0 amp			<1.0 amp	>1.0 amp								>0.8 amp	<0.8 amp				>1.0 amp
Sample Number	% Cpy	Misc. Prime MMSIMs	% Py	% Gth	# Grains + Colour Spinel	Cr-grossular	low-Cr diopside	Mn-epidote	corundum	% Red Rutile	% Ky	% Sil	% St	% Sps	% Fay	% Opx	% Cr (see KIM data)	Prime Carbonate Minerals
01-JR-MA-190	0	0	Tr (3 gr)	Tr	0	0	Tr(1gr)	0	0	0	0	Tr	2	0	1	0	0	0
01-JR-MA-191	0	0	0	Tr	0	0	Tr(1gr)	0	0	0	Tr	0	7	0	5	0	0	0
01-JR-MA-192	0	0	Tr (1 gr)	Tr	0	0	Tr(1gr)	0	0	0	Tr	0	4	0	0	4	Tr (4 gr)	0
01-JR-MA-193	0	0	0	0	0	0	Tr(2gr)	0	0	0	0	0	5	0	0	Tr	0	0
01-JR-MA-194	0	0	0	Tr	0	0	0	0	0	0	0	Tr	4	0	0.5	0	0	0
01-JR-MA-195	0	0	0	Tr	0	0	Tr(10gr)	0	0	0	Tr	0	2	0	0	1	0	0
01-JR-MA-196	0	0	Tr (~15 gr)	0	0	0	0	0	0	0	0	0	3	0	1	Tr	Tr (3 gr)	0
01-JR-MA-197	Tr (6 gr)	Tr molybdenite (5 gr)	Tr (~15 gr)	0	0	0	Tr(1gr)	0	0	Tr (1 gr)	0	0	5	0	0	0	5 (~500 gr)	0
01-JR-MA-198	0	Tr molybdenite (2 gr)	2 (~500 gr)	Tr	0	0	0	0	0	0	0	0	Tr	0	0	0	0	0
01-JR-MA-199	0	0	0.5 (~200 gr)	0	0	0	0	0	0	0	Tr	0	Tr	0	0	0	0	0
01-JR-MA-200	0	Tr molybdenite (1 gr)	Tr (~15 gr)	0	0	0	Tr(2gr)	0	0	Tr (~60 gr)	7	0	3	0	Tr	2	0	0
01-JR-MA-201	0	0	Tr (5 gr)	0	0	0	0	0	0	0	Tr	0	0.5	0	0	Tr	0	0
01-JR-MA-202	0	Tr molybdenite (1 gr)	Tr (~40 gr)	0	0	0	0	0	0	0	Tr	0	Tr	0	0	0	0	0
01-JR-MA-203	Tr (1 gr)	Tr molybdenite (1 gr)	Tr (~30 gr)	Tr	0	0	Tr(2gr)	0	0	0	Tr	Tr	3	0	0	Tr	0	0
01-JR-MA-204	0	0	Tr (8 gr)	0	0	0	Tr(1gr)	0	0	0	Tr	Tr	5	0	0	Tr	0	0

Sample Number	Sulphide/Arsenide and Related Minerals 0.25-0.5 mm				Mg/Mn/Al/Cr Minerals 0.25-0.5 mm													
	>1.0 amp			<1.0 amp	>1.0 amp								>0.8 amp	<0.8 amp				>1.0 amp
	% Cpy	Misc. Prime MMSIMs	% Py	% Gth	# Grains + Colour Spinel	Cr-grossular	low-Cr diopside	Mn-epidote	corundum	% Red Rutile	% Ky	% Sil	% St	% Sps	% Fay	% Opx	% Cr (see EIM data)	Prime Carbonate Minerals
01-JR-MA-205	0	0	Tr (5 gr)	0	0	0	0	0	0	0	1	0	5	0	0	0	0	0
01-JR-MA-206	0	Tr molybdenite (1 gr)	Tr (~15 gr)	0	1 pale purple	0	0	0	0	Tr (4 gr)	Tr	0	10	10	0	0	Tr (2 gr)	0
01-JR-MA-207	0	Tr molybdenite (3 gr)	Tr (5 gr)	0	0	0	Tr(3gr)	0	0	Tr (17 gr)	1	Tr	5	Tr	0	Tr	0	0
01-JR-MA-208	0	0	Tr (1 gr)	0	0	0	0	0	0	0	Tr	Tr	Tr	0	0	0	0	0
01-JR-MA-209	0	0	0	0	0	0	0	0	0	0	Tr	Tr	Tr	0	0	0	0	0
01-JR-MA-210	0	0	0	Tr	0	0	Tr(5gr)	0	0	0	Tr	Tr	2	Tr	0	0	Tr (1 gr)	0
01-JR-MA-211	Tr (1 gr)	0	Tr (4 gr)	0	0	0	Tr(4gr)	0	0	0	0	Tr	5	0	Tr	Tr	Tr (1 gr)	0
01-JR-MA-212	0	0	0	0	0	0	0	0	0	0	Tr	Tr	4	0	0	0	Tr (7 gr)	0
01-JR-MA-213	Tr (1 gr)	0	Tr (10 gr)	0	0	0	0	0	0	0	0	Tr	5	Tr	0	0	0	0
01-JR-MA-214	0	0	Tr (5 gr)	Tr	1 green gahnite	0	Tr(8gr)	0	0	0	Tr	Tr	12	Tr	0	Tr	Tr (~200 gr)	0
01-JR-MA-215	0	Tr molybdenite (9 gr)	Tr (5 gr)	0	0	0	Tr(2gr)	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-216	0	0	Tr (5 gr)	0	0	0	0	0	0	0	Tr	0	Tr	0	0	0	0	0
01-JR-MA-217	0	0	0	0	0	0	Tr(7gr)	0	0	0	0	0	5	0	0	Tr	0	0
01-JR-MA-218	Tr (3 gr)	0	0.5 (~100 gr)	0	0	0	Tr(9gr)	0	0	0	Tr	0	3	Tr	0	0	Tr (4 gr)	0
01-JR-MA-219	Tr (1 gr)	0	1 (~300 gr)	0	0	0	0	0	0	0	Tr	0	4	0	0	0	Tr (1 gr)	0
01-JR-MA-220	0	0	1 (~200 gr)	0	0	0	0	0	0	0	0	0	2	0	0	Tr	0	0

Sample Number	Sulphide/Arsenide and Related Minerals 0.25-0.5 mm				Mg/Mn/Al/Cr Minerals 0.25-0.5 mm													
	>1.0 amp			<1.0 amp	>1.0 amp								>0.8 amp	<0.8 amp				>1.0 amp
	% Cpy	Misc. Prime MMSIMs	% Py	% Grh	# Grains + Colour Spinel	Cr-grossular	low-Cr diopside	Mn-epidote	corundum	% Red Rutile	% Ky	% Sil	% St	% Sps	% Fay	% Opx	% Cr (see KIM data)	Prime Carbonatite Minerals
01-JR-MA-221	0	0	0	0	0	0	Tr(1gr)	0	0	0	Tr	0	8	Tr	0	0	Tr (3 gr)	0
01-JR-MA-222	0	0	0	0	0	0	Tr(1gr)	0	0	0	0	0	0	0	0	0	0	0
01-JR-MA-223	Tr (1 gr)	Tr molybdenite (3 gr)	2 (~200 gr)	0	0	Tr(1gr)	0	0	0	0	0	0	1	Tr	0	0	0	0
01-JR-MA-224	0	0	Tr (4 gr)	0	0	0	Tr(8gr)	0	0	0	0	0	2	0	0	Tr	0	0
01-JR-MA-225	0	Tr molybdenite (3 gr)	Tr (~20 gr)	0	0	0	0	0	0	0	0	Tr	4	0	0	Tr	Tr (1 gr)	0
01-JR-MA-226	0	0	Tr (~20 gr)	0	0	0	Tr(4gr)	0	0	0	0	0	5	Tr	0	0	Tr (4 gr)	0
01-JR-MA-227	0	0	Tr (3 gr)	0	0	0	Tr(1gr)	0	0	0	1	Tr	3	0	0	0	Tr (1 gr)	0
01-JR-MA-228	0	0	Tr (~15 gr)	0	0	0	0	0	0	0	0	0	Tr	0	0	0	0	0
01-JR-MA-229	0	0	Tr (1 gr)	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
01-JR-MA-230	Tr (1 gr)	Tr molybdenite (2 gr)	Tr (2 gr)	Tr	1 red Cr-spinel	0	Tr(5gr)	0	0	Tr	1	Tr	15	Tr	0	0	Tr (1 gr)	0
01-JR-MA-231	Tr (1 gr)	0	0.5 (~75 gr)	0	0	0	0	0	0	0	Tr	0	10	0	0	0	Tr (1 gr)	0
01-JR-MA-232	Tr (1 gr)	0	Tr (~20 gr)	0	0	0	0	0	0	0	Tr	0	3	0	0	0	0	0
01-JR-MA-233	Tr (3 gr)	Tr molybdenite (7 gr)	2 (~400 gr)	0	0	0	0	0	0	0	0	Tr	12	0	0	0	Tr (4 gr)	0
01-JR-MA-234	0	Tr molybdenite (6 gr)	Tr (~30 gr)	0	0	0	0	0	0	0	0.5	Tr	3	0	0	0	Tr (1 gr)	0
01-JR-MA-235	0	0	3 (~100 gr)	0	0	0	0	0	0	0	Tr	0	3	0	0	0	0	0

Sample Number	Sulphide/Arsenide and Related Minerals 0.25-0.5 mm				Mg/Mn/Al/Cr Minerals 0.25-0.5 mm													
	>1.0 amp			<1.0 amp	>1.0 amp								>0.8 amp	<0.8 amp				>1.0 amp
	% Cpy	Misc. Prime MMSIMs	% Py	% Gth	# Grains + Colour Spinel	Cr-grossular	low-Cr diopside	Mn-epidote	corundum	% Red Rutile	% Ky	% Sil	% St	% Sps	% Fay	% Opx	% Cr (non KIM diop)	Prime Carbonate Minerals
01-JR-MA-236	Tr (7 gr)	Tr molybdenite (1 gr)	1 (~450 gr)	Tr	0	0	Tr(2gr)	Tr(2gr)	0	0	1	0	15	0	0	0	Tr (1 gr)	0
01-JR-MA-237	0	0	Tr (5 gr)	0	0	0	0	0	0	Tr (3 gr)	0	0	6	Tr	0	0	Tr (9 gr)	0
01-JR-MA-238	0	0	0	0	0	0	0	Tr(16gr)	0	0	Tr	Tr	1	2	0	0	Tr (16 gr)	0
01-JR-MA-239	0	Tr molybdenite (2 gr)	Tr (~20 gr)	0	0	0	0	Tr(1gr)	0	0	Tr	Tr	1	0	0	0	0	0
01-JR-MA-240	0	0	0	0	0	0	0	Tr(1gr)	0	0	Tr	0	Tr	0	0	0	0	0
01-JR-MA-241	Tr (22 gr)	Tr molybdenite (1 gr)	3 (~2000 gr)	Tr	0	0	Tr(10gr)	Tr(1gr)	0	0	85	Tr	Tr	0	0	0	0	0
01-JR-MA-242	0	0	0	0	0	0	0	0	0	Tr (1 gr)	5	Tr	Tr	0	0	0	Tr (2 gr)	0
01-JR-MA-243	0	0	Tr (1 gr)	Tr	0	0	Tr(2gr)	0	0	Tr (1 gr)	Tr	Tr	15	Tr	0	Tr	Tr (2 gr)	0
01-JR-MA-244	0	0	0	0	0	0	Tr(1gr)	0	0	0	Tr	0	7	Tr	0	0	0	0
01-JR-MA-245	0	0	0	0	0	0	Tr(3gr)	0	0	0	0	0	3	0	0	3	0	0
01-JR-MA-246	0	0	0	0	0	0	0	0	0	0	Tr	0	7	3	0	0	Tr (12 gr)	0
01-JR-MA-247	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	Tr	Tr (1 gr)	0
01-JR-MA-248	0	0	Tr (5 gr)	3	0	0	0	0	0	0	3	0	Tr	0	0	0	0	0
01-JR-MA-249	Tr (1 gr)	0	15 (~400 gr)	5	0	0	0	0	0	0	Tr	0	Tr	Tr	Tr	3	Tr (2 gr)	0
01-JR-MA-250	0	0	Tr (~25 gr)	0	0	0	0	0	0	0	0	0	5	Tr	0	0	Tr (~40 gr)	0
01-JR-MA-251	0	0	0	0	0	0	0	0	0	0	0	0	Tr	0	0	Tr	Tr (1 gr)	0
01-JR-MA-252	0	0	0	0	0	0	0	0	0	0	0	0	Tr	0	0	Tr	0	0

Sample Number	Sulphide/Arsenide and Related Minerals 0.25-0.5 mm				Mg/Mn/Al/Cr Minerals 0.25-0.5 mm													
	>1.0 amp			<1.0 amp	>1.0 amp								>0.8 amp	<0.8 amp				>1.0 amp
	% Cpy	Misc. Prime MMSIMs	% Py	% Gth	# Grains + Colour Spinel	Cr-grossular	low-Cr diopside	Mn-epidote	corundum	% Red Rutile	% Ky	% Sil	% St	% Sps	% Fay	% Opx	% Cr (est. SEM data)	Prime Carbonate Minerals
01-JR-MA-253	0	0	Tr (4 gr)	0	0	0	Tr(6gr)	0	0	0	Tr	Tr	2	0	0	1	Tr (~60 gr)	0
01-JR-MA-254	0	0	Tr (2 gr)	Tr	0	Tr(1gr)	Tr(9gr)	0	0	0	Tr	0	3	Tr	0	Tr	Tr (14 gr)	0
01-JR-MA-255	0	0	0	0	0	0	Tr(6gr)	0	0	0	Tr	0	3	Tr	0	Tr	Tr (1 gr)	0
01-JR-MA-256	0	0	Tr (5 gr)	0	0	0	Tr(2gr)	0	0	0	Tr	0	3	0	0	0	0	0
01-JR-MA-257	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0
01-JR-SG-001	Tr (18 gr)	0	0	0	0	0	Tr(10gr)	0	0	0	0	0	Tr	Tr	0	Tr	Tr (~15 gr)	0
01-JR-SG-002	0	0	0	0	0	0	Tr(7gr)	0	0	Tr (1 gr)	Tr	0	0.5	0	0	Tr	Tr (2 gr)	0
01-JR-SG-003	0	0	0	0	0	0	Tr(9gr)	0	0	0	2	0	2	0	0	Tr	0	0
01-JR-SG-004	0	0	Tr (4 gr)	Tr	0	0	Tr(2gr)	0	0	0	4	0	Tr	0	0	Tr	Tr (1 gr)	0
01-JR-SG-005	Tr (1 gr)	0	Tr (10 gr)	Tr	0	0	Tr(1gr)	0	0	Tr (5 gr)	0.5	Tr	3	0	0	Tr	Tr (3 gr)	0
01-JR-SG-006	0	0	0	0	0	0	Tr(1gr)	Tr(1gr)	0	Tr (12 gr)	7	0	Tr	0	0	0	0	0
01-JR-SG-007	0	0	5 (~1500 gr)	1	0	0	Tr(2gr)	0	0	Tr. (1 gr)	1	0	15	0	0	0	Tr (~40 gr)	0
01-JR-SG-008	0	0	3 (~600 gr)	2	0	0	0	0	0	0	Tr	Tr	3	0	0	Tr	Tr (4 gr)	0
01-JR-SG-009	0	0	0	Tr	0	0	Tr(6gr)	Tr(1gr)	0	Tr (8 gr)	Tr	Tr	7	Tr	Tr	2	Tr (2 gr)	0
01-JR-SG-010	0	0	0	Tr	1 blue	0	Tr(11gr)	0	0	Tr (10 gr)	Tr	0	Tr	0	0	0	Tr (2 gr)	0
01-JR-SG-011	0	0	0.5 (~150 gr)	Tr	0	0	Tr(9gr)	0	0	0	Tr	0	15	0	0	0	Tr (2 gr)	0

Sample Number	Sulphide/Arsenide and Related Minerals 0.25-0.5 mm				Mg/Mn/Al/Cr Minerals 0.25-0.5 mm													
	>1.0 amp			<1.0 amp	>1.0 amp								>0.8 amp	<0.8 amp				>1.0 amp
	% Cpy	Misc. Prime MMSIMs	% Py	% Gth	# Grains + Colour Spinel	Cr-grossular	low-Cr diopside	Mn-epidote	corundum	% Red Rutile	% Ky	% Sil	% St	% Sps	% Fay	% Cpx	% Cr (see XRD data)	Prime Carbonate Minerals
01-JR-SG-012	0	0	Tr (10 gr)	Tr	1 blue-green gahnite	0	Tr(4gr)	Tr(2gr)	0	Tr (9 gr)	Tr	Tr	20	0	0	Tr	Tr (9 gr)	0
01-JR-SG-013	0	0	0	0	0	0	0	0	0	0	Tr	0	0	0	0	0	0	0
01-JR-SG-014	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0	0	0	0	0
01-JR-TM-002	0	0	0	0	0	0	Tr(1gr)	0	0	0	0	0	5	0	Tr	5	Tr (1 gr)	0
01-JR-TM-003	0	0	0	0	0	0	Tr(1gr)	0	0	0	1	0	Tr	0	0	0	Tr (1 gr)	0
01-JR-TM-004	0	0	0	0	0	0	Tr(3gr)	0	0	0	Tr	0	4	0	0	Tr	Tr (6 gr)	0
01-JR-TM-005	0	0	0	0	0	0	Tr(3gr)	0	0	0	0	0	Tr	0	2	4	Tr (3 gr)	0
01-JR-TM-006	0	0	Tr (5 gr)	Tr	0	0	Tr(3gr)	0	0	0	0	0	3	Tr	7	20	Tr (4 gr)	0
01-JR-TM-007	Tr (6 gr)	0	0	0	0	0	Tr(5gr)	0	0	0	0	0	1	Tr	Tr	Tr	Tr (3 gr)	0
01-JR-TM-008	0	0	Tr (1 gr)	0	0	0	Tr(1gr)	0	0	0	0	0	0.5	0	4	4	Tr (2 gr)	0
01-JR-BD-001	0	0	0	0	0	0	Tr(7gr)	0	0	0	0	0	3	Tr	Tr	Tr	Tr (4 gr)	0

Appendix J

Pebble Lithology Counts

Summary List Of Abbreviations:

FI: Felsic Intrusive
MI: Mafic Intrusive
GN: Gneiss
FMV: Felsic Metavolcanic
MMV: Mafic Metavolcanic
SED: Sedimentary
OTH: other

FIG: Felsic Igneous rocks
MIG: Migmatitc rocks and gneisses
MR: Mafic rocks
HSG: Huronian Supergroup

Rock Type: describes that which is present where the sample was taken

Sample	Rock Type	FI %	MI %	GN %	FMV %	MMV %	SED %	OTH %	Total Volcanics	Total Intrusives	Total Sedimentary
01-JR-P-001	FIG	80	20	0	0	0	0	0	0	100	0
01-JR-P-002	FIG	45	45	0	0	0	4	5	0	91	4
01-JR-P-003	FIG	60	38	0	0	2	0	0	2	98	0
01-JR-P-004	MIG	45	43	0	0	0	0	11	0	89	0
01-JR-P-005	FIG	31	63	0	0	6	0	0	6	94	0
01-JR-P-006	FIG	30	65	0	0	0	4	2	0	94	4
01-JR-P-007	GN	45	45	0	0	0	0	9	0	91	0
01-JR-P-008	FIG	46	54	0	0	0	0	0	0	100	0
01-JR-P-009	GN	43	56	0	0	2	0	0	2	98	0
01-JR-P-010	FIG	35	57	0	0	0	6	2	0	92	6
01-JR-P-011	GN	62	38	0	0	0	0	0	0	100	0
01-JR-P-012	GN	55	38	0	0	0	0	7	0	93	0
01-JR-P-013	FIG	47	53	0	0	0	0	0	0	100	0
01-JR-P-014	MIG	67	29	2	0	2	0	0	2	96	0
01-JR-P-015	MIG	48	44	0	0	0	1	7	0	92	1
01-JR-P-016	MIG	41	59	0	0	0	0	0	0	100	0
01-JR-P-017	MIG	47	47	0	0	0	0	6	0	94	0
01-JR-P-018	MIG	57	36	0	0	0	3	3	0	93	3
01-JR-P-019	MIG	85	9	4	0	0	2	0	0	94	2
01-JR-P-021	MIG	36	63	0	1	0	0	0	1	99	0
01-JR-P-023	MIG	69	25	0	0	0	3	3	0	94	3
01-JR-P-025	MIG	27	67	0	5	0	0	0	5	95	0
01-JR-P-028	MIG	58	37	0	0	6	0	0	6	94	0
01-JR-P-029	MIG	36	60	0	2	0	2	0	2	96	2
01-JR-P-030	GN	45	40	0	3	7	5	0	10	85	5
01-JR-P-031	FIG	78	20	0	0	0	2	0	0	98	2
01-JR-P-032	GN	48	52	0	0	0	0	0	0	100	0
01-JR-P-033	MIG	59	35	0	0	0	0	6	0	94	0
01-JR-P-034	GN	81	7	0	0	0	6	6	0	89	6
01-JR-P-035	MIG	73	24	0	0	0	2	2	0	96	2
01-JR-P-036	GN	59	36	0	0	0	5	0	0	95	5
01-JR-P-037	GN	82	18	0	0	0	0	0	0	100	0
01-JR-P-040	GN	35	60	0	2	2	0	0	4	96	0
01-JR-P-043	MIG	58	40	0	0	0	2	0	0	98	2
01-JR-P-044	MIG	63	30	0	0	0	0	7	0	93	0
01-JR-P-048	MIG	74	26	0	0	0	0	0	0	100	0
01-JR-P-049	GN	66	34	0	0	0	0	0	0	100	0

Sample	Rock Type	FI %	MI %	GN %	FMV %	MMV %	SED %	OTH %	Total Volcanics	Total Intrusives	Total Sedimentary
01-JR-P-050	FIG	83	17	0	0	0	0	0	0	100	0
01-JR-P-052	GN	88	10	0	0	0	2	0	0	98	2
01-JR-P-054	MIG	65	22	0	0	0	8	6	0	86	8
01-JR-P-055	GN	70	25	0	0	5	0	0	5	95	0
01-JR-P-056	MIG	89	11	0	0	0	0	0	0	100	0
01-JR-P-057	MIG	100	0	0	0	0	0	0	0	100	0
01-JR-P-058	GN	100	0	0	0	0	0	0	0	100	0
01-JR-P-059	GN	74	18	0	0	0	3	5	0	92	3
01-JR-P-060	GN	89	11	0	0	0	0	0	0	100	0
01-JR-P-061	GN	66	30	0	2	2	0	0	4	96	0
01-JR-P-062	MIG	72	26	0	3	0	0	0	3	97	0
01-JR-P-063	MIG	57	42	0	0	0	0	2	0	98	0
01-JR-P-064	GN	63	38	0	0	0	0	0	0	100	0
01-JR-P-065	FIG	71	29	0	0	0	0	0	0	100	0
01-JR-P-066	GN	61	32	0	0	0	0	6	0	94	0
01-JR-P-067	MIG	68	32	0	0	0	0	0	0	100	0
01-JR-P-069	MIG	61	39	0	0	0	0	0	0	100	0
01-JR-P-070	GN	18	80	0	0	0	0	2	0	98	0
01-JR-P-071	MIG	49	43	0	0	0	2	6	0	92	2
01-JR-P-072	MIG	92	6	0	0	0	2	0	0	98	2
01-JR-P-073	GN	57	38	0	0	0	0	4	0	96	0
01-JR-P-074	GN	0	69	0	0	0	23	8	0	69	23
01-JR-P-075	GN	56	32	0	2	0	4	6	2	88	4
01-JR-P-077	GN	98	2	0	0	0	0	0	0	100	0
01-JR-P-078	MIG	50	47	0	0	0	0	3	0	97	0
01-JR-P-079	MIG	87	6	0	0	0	6	2	0	92	6
01-JR-P-082	MIG	54	38	0	0	0	4	4	0	92	4
01-JR-P-083	MIG	84	0	0	0	0	0	16	0	84	0
01-JR-P-084	MIG	73	21	0	2	0	0	4	2	95	0
01-JR-P-086	FIG	73	27	0	0	0	0	0	0	100	0
01-JR-P-087	FIG	52	41	0	0	0	0	7	0	93	0
01-JR-P-090	FIG	65	26	0	0	0	9	0	0	91	9
01-JR-P-092	FIG	42	58	0	0	0	0	0	0	100	0
01-JR-P-094	FIG	63	37	0	0	0	0	0	0	100	0
01-JR-P-097	GN	48	0	3	0	0	32	17	0	48	32
01-JR-P-100	MIG	64	24	0	4	0	8	0	4	88	8
01-JR-P-103	FIG	83	17	0	0	0	0	0	0	100	0

Sample	Rock Type	FI %	MI %	GN %	FMV %	MMV %	SED %	OTH %	Total Volcanics	Total Intrusives	Total Sedimentary
01-JR-P-104	FIG	99	0	0	0	0	0	1	0	99	0
01-JR-P-105	GN	55	45	0	0	0	0	0	0	100	0
01-JR-P-106	GN	90	0	0	0	0	0	10	0	90	0
01-JR-P-107	MIG	80	20	0	0	0	0	0	0	100	0
01-JR-P-108	FIG	55	39	0	0	0	3	3	0	95	3
01-JR-P-110	GN	53	33	0	0	0	12	2	0	86	12
01-JR-P-111	GN	43	47	0	0	0	10	0	0	90	10
01-JR-P-112	MIG	76	17	0	0	7	0	0	7	93	0
01-JR-P-113	MIG	63	31	2	0	0	4	0	0	94	4
01-JR-P-114	MIG	87	4	0	0	0	1	7	0	91	1
01-JR-P-115	MIG	35	65	0	0	0	0	0	0	100	0
01-JR-P-116	GN	34	57	0	0	0	6	4	0	91	6
01-JR-P-117	MIG	30	64	0	0	0	6	0	0	94	6
01-JR-P-118	MIG	44	43	0	0	0	8	5	0	87	8
01-JR-P-119	MR	53	47	0	0	0	0	0	0	100	0
01-JR-P-120	MR	69	6	0	0	0	0	24	0	76	0
01-JR-P-121	GN	70	20	0	0	0	0	9	0	91	0
01-JR-P-122	GN	71	17	2	0	0	0	10	0	88	0
01-JR-P-123	GN	85	0	0	4	2	8	2	6	85	8
01-JR-P-125	MIG	80	15	0	4	0	2	0	4	94	2
01-JR-P-126	MIG	46	46	0	0	0	0	8	0	92	0
01-JR-P-127	GN	100	0	0	0	0	0	0	0	100	0
01-JR-P-129	MIG	79	15	0	0	0	0	6	0	94	0
01-JR-P-130	MIG	57	41	0	0	2	0	0	2	98	0
01-JR-P-131	MIG	65	12	0	0	0	13	10	0	77	13
01-JR-P-132	MIG	57	18	0	0	0	25	0	0	75	25
01-JR-P-133	MIG	61	39	0	0	0	0	0	0	100	0
01-JR-P-134	MIG	58	25	0	0	0	11	6	0	83	11
01-JR-P-135	MIG	73	2	0	4	8	12	0	12	76	12
01-JR-P-136	MIG	46	25	0	0	0	23	6	0	71	23
01-JR-P-137	HSG	2	6	0	0	0	93	0	0	7	93
01-JR-P-138	MI	0	0	0	6	10	85	0	15	0	85
01-JR-P-139	HSG	11	0	0	0	0	89	0	0	11	89
01-JR-P-140	HSG	50	0	0	0	16	34	0	16	50	34
01-JR-P-141	HSG	24	0	0	0	43	33	0	43	24	33
01-JR-P-142	HSG	14	0	0	5	56	25	0	62	14	25
01-JR-P-143	HSG	0	14	0	0	0	86	0	0	14	86

Sample	Rock Type	FI %	MI %	GN %	FMV %	MMV %	SED %	OTH %	Total Volcanics	Total Intrusives	Total Sedimentary
01-JR-P-144	MI	2	0	0	7	32	59	0	39	2	59
01-JR-P-145	HSG	4	0	0	0	0	96	0	0	4	96
01-JR-P-146	HSG	4	0	0	0	14	82	0	14	4	82
01-JR-P-147	HSG	13	7	0	9	20	50	0	30	20	50
01-JR-P-148	HSG	0	0	0	4	72	25	0	75	0	25
01-JR-P-149	FI	14	86	0	0	0	0	0	0	100	0
01-JR-P-150	FI	55	16	0	0	13	17	0	13	70	17
01-JR-P-151	FI	32	2	0	6	11	49	0	17	34	49
01-JR-P-153	FI	41	49	0	0	0	10	0	0	90	10
01-JR-P-154	FI	73	0	0	4	0	23	0	4	73	23
01-JR-P-155	FIG	0	0	0	71	24	6	0	94	0	6
01-JR-P-156	MIG	28	11	0	4	2	55	0	6	38	55
01-JR-P-157	MIG	50	10	0	0	0	40	0	0	60	40
01-JR-P-158	MIG	25	0	0	34	11	30	0	45	25	30
01-JR-P-160	MIG	64	0	0	0	0	0	36	0	64	0
01-JR-P-161	MIG	51	11	0	0	0	26	12	0	61	26
01-JR-P-162	MMV	19	19	0	0	0	62	0	0	38	62
01-JR-P-165	HSG	13	10	0	0	0	77	0	0	23	77
01-JR-P-166	HSG	0	0	0	0	46	54	0	46	0	54
01-JR-P-167	HSG	26	20	0	0	22	31	0	22	46	31
01-JR-P-168	HSG	26	24	0	0	0	50	0	0	50	50
01-JR-P-169	HSG	17	23	0	0	15	34	11	15	40	34
01-JR-P-171	HSG	29	6	0	0	0	65	0	0	35	65
01-JR-P-172	HSG	32	0	0	10	36	12	10	46	32	12
01-JR-P-173	HSG	17	20	0	0	0	54	10	0	37	54
01-JR-P-174	MI	24	54	0	0	6	6	10	6	78	6
01-JR-P-180	HSG	28	0	0	0	9	64	0	9	28	64
01-JR-P-181	HSG	29	8	0	0	0	41	22	0	37	41
01-JR-P-182	FI	16	0	0	14	9	54	7	23	16	54
01-JR-P-183	MIG	25	0	0	9	7	52	7	16	25	52
01-JR-P-184	HSG	19	12	0	4	0	56	10	4	31	56
01-JR-P-185	HSG	20	7	0	0	16	56	2	16	27	56
01-JR-P-186	FI	20	0	0	6	0	69	6	6	20	69
01-JR-P-187	FI	13	27	0	4	10	42	4	13	40	42
01-JR-P-188	HSG	83	0	0	0	6	10	0	6	83	10
01-JR-P-189	HSG	43	0	0	9	16	23	9	25	43	23
01-JR-P-190	HSG	76	0	0	0	12	12	0	12	76	12

Sample	Rock Type	FI %	MI %	GN %	FMV %	MMV %	SED %	OTH %	Total Volcanics	Total Intrusives	Total Sedimentary
01-JR-P-191	HSG	0	0	0	6	68	26	0	74	0	26
01-JR-P-192	HSG	6	0	0	11	59	24	0	70	6	24
01-JR-P-194	HSG	9	0	2	15	19	55	0	34	9	55
01-JR-P-195	HSG	40	0	0	0	0	60	0	0	40	60
01-JR-P-196	MIG	52	0	0	3	8	37	0	11	52	37
01-JR-P-197	MIG	7	15	0	0	0	67	11	0	22	67
01-JR-P-198	MIG	3	0	3	0	80	0	14	80	3	0
01-JR-P-199	MIG	26	0	0	37	19	17	2	56	26	17
01-JR-P-200	MIG	33	29	0	0	21	17	0	21	62	17
01-JR-P-201	MIG	45	49	0	0	6	0	0	6	94	0
01-JR-P-202	MIG	69	0	31	0	0	0	0	0	69	0
01-JR-P-203	MIG	50	29	0	0	4	18	0	4	79	18
01-JR-P-204	MIG	51	28	0	0	0	21	0	0	79	21
01-JR-P-205	MIG	36	50	0	0	0	14	0	0	86	14
01-JR-P-206	MIG	28	0	0	0	63	9	0	63	28	9
01-JR-P-207	MIG	23	55	0	0	23	0	0	23	77	0
01-JR-P-211	FI	23	0	0	0	32	45	0	32	23	45
01-JR-P-212	HSG	7	0	0	2	39	52	0	41	7	52
01-JR-P-213	MMV	2	0	0	8	29	62	0	37	2	62
01-JR-P-214	HSG	0	0	0	55	9	30	6	64	0	30
01-JR-P-218	MIG	26	0	0	0	26	41	7	26	26	41
01-JR-P-223	MIG	10	10	0	0	0	80	0	0	20	80
01-JR-P-226	MIG	43	19	0	0	0	38	0	0	62	38
01-JR-P-228	MIG	92	0	0	0	8	0	0	8	92	0
01-JR-P-231	MIG	26	26	0	0	41	7	0	41	52	7
01-JR-P-232	MIG	52	7	0	0	0	41	0	0	59	41
01-JR-P-233	MIG	53	4	0	0	35	8	0	35	57	8
01-JR-P-235	MIG	28	0	0	0	39	33	0	39	28	33
01-JR-P-237	MIG	39	0	45	0	0	14	2	0	39	14
01-JR-P-238	GN	57	23	0	0	0	6	15	0	79	6
01-JR-P-242	GN	76	7	0	0	0	0	16	0	84	0
01-JR-P-244	GN	51	29	0	0	0	20	0	0	80	20
01-JR-P-245	HSG	74	0	0	0	0	25	1	0	74	25
01-JR-P-246	HSG	13	0	0	0	87	0	0	87	13	0
01-JR-P-247	HSG	30	0	0	0	25	45	0	25	30	45
01-JR-P-248	HSG	0	0	0	30	70	0	0	100	0	0

Sample	Rock Type	FI %	MI %	GN %	FMV %	MMV %	SED %	OTH %	Total Volcanics	Total Intrusives	Total Sedimentary
01-JR-P-249	HSG	53	5	0	9	0	33	0	9	59	33
01-JR-P-250	FI	6	0	0	12	0	83	0	12	6	83
01-JR-P-251	HSG	4	18	0	16	49	12	0	65	22	12
01-JR-P-253	HSG	19	10	0	0	29	42	0	29	29	42
01-JR-P-254	HSG	21	18	0	0	15	46	0	15	39	46
01-JR-P-257	HSG	49	19	0	0	0	31	2	0	68	31
01-JR-SG-P-001	HSG	0	0	0	0	0	100	0	0	0	100
01-JR-SG-P-002	HSG	52	0	0	0	0	47	1	0	52	47
01-JR-SG-P-005	MIG	71	27	0	0	0	2	0	0	98	2
01-JR-SG-P-006	MIG	60	0	4	0	18	0	18	18	60	0
01-JR-SG-P-007	GN	37	31	2	0	13	17	0	13	67	17
01-JR-SG-P-008	GN	48	17	0	0	7	28	0	7	65	28
01-JR-SG-P-011	GN	65	13	0	0	13	9	0	13	78	9
01-JR-SG-P-012	GN	46	9	6	0	20	19	0	20	56	19
01-JR-TM-P-001	MIG	34	30	2	0	0	30	4	0	64	30
01-JR-TM-P-002	MIG	66	2	4	0	0	24	4	0	68	24
01-JR-TM-P-003	MIG	10	84	6	0	0	0	0	0	94	0
01-JR-TM-P-004	MIG	54	19	0	0	6	19	2	6	73	19
01-JR-TM-P-005	FI	27	31	0	0	0	42	0	0	58	42
01-JR-TM-P-006	FI	31	19	0	0	9	41	0	9	50	41
01-JR-TM-P-007	FI	11	20	0	0	0	70	0	0	30	70
01-JR-TM-P-008	MMV	2	32	0	0	0	62	4	0	34	62

Appendix K

Summary of Normalized Kimberlite Indicator Mineral Results

Summary List of Abbreviations:

GP:	Pyrope Garnet	GAR:	garnet
GO:	Eclogitic Garnet	Cr:	chromium
DC:	Chrome Diopside	diop:	diopside
IM:	Ilmenite	KIM:	kimberlitic
CR:	Chromite		
FO:	Forsteritic Olivine		
(p):	amount of grains picked from sample		
(e):	amount of grains estimated to be in sample		
tot:	total		
c:	confirmed		
s:	sent		

❐ Total KIM Chromites include those that plot within the overlap field and are considered to possibly be of kimberlitic affinity

Sample Calculations

** Picked Estimate Normalization*

Example:
For sampleN 01-JR-MA-073, 74 chromites were estimated to be present but only 44 chromites were removed (picked). Microprobe analysis confirmed that 31 were kimberlitic. The normalization calculation performed as follows:

$$\text{\# of normalized grains} = \frac{(\text{estimated \# of grains})}{(\text{\# of picked grains})} \times (\text{\# of confirmed KIMS})$$

$$= \frac{74}{44} \times 31$$

$$= 52 \text{ grains}$$

*** Table feed weight normalization*

Example:
For sample 01-JR-MA-073, 31 chromites were confirmed as kimberlitic. The table feed was 5.4 kg and was normalized to a table feed of 8 kg, the average of the samples, in the following way:

$$\text{\# of normalized grains} = \frac{(8\text{ kg})}{(\text{table feed weight})} \times (\text{\# of confirmed KIMS})$$

$$= \frac{8}{5.4} \times 31$$

$$= 46 \text{ grains}$$

Sample	tot GP	tot GO	tot GAR	tot GP	tot GO	tot KIM GAR	tot crustal GAR	tot GAR	tot low cr-disp	tot low cr-disp	tot DC	tot disp	tot KIM DC	tot low cr-disp	tot disp	tot IM	tot IM	tot IM	tot KIM IM	tot crustal IM	tot IM
number	p	p	s	c	c	c	c	c	p	p(e)	p	s	c	c	c	p	p(e)	s	s	c	c
1	0	0	0	0	0	0	4	4	11	n/a	0	11	10	0	10	0	n/a	0	0	0	0
2	0	0	0	0	0	0	0	0	42	n/a	0	1	39	3	42	0	n/a	0	0	3	3
3	0	0	0	0	1	1	1	2	12	n/a	0	12	12	3	15	0	n/a	0	0	0	0
4	0	0	0	0	0	0	2	2	12	n/a	0	12	11	1	12	0	n/a	0	0	1	1
5	0	0	0	0	0	0	0	0	21	n/a	0	21	19	1	20	0	n/a	0	0	0	0
6	0	0	0	0	0	0	0	0	3	n/a	0	3	2	0	2	0	n/a	0	0	5	5
7	0	0	0	0	0	0	0	0	7	n/a	0	7	5	2	7	0	n/a	0	0	0	0
8	0	0	0	0	0	0	0	0	8	n/a	0	9	7	1	8	0	n/a	0	0	0	0
9	0	0	0	0	0	0	0	0	2	n/a	0	2	2	0	2	0	n/a	0	0	0	0
10	0	0	0	0	0	0	0	0	31	n/a	0	31	28	2	30	0	n/a	0	0	0	0
11	1	0	1	1	0	1	0	1	3	n/a	0	3	4	0	4	0	n/a	0	0	0	0
12	0	1	1	1	0	1	0	1	4	n/a	0	4	2	2	4	0	n/a	0	0	1	1
13	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
14	0	0	0	0	0	0	0	0	31	n/a	1	32	38	7	45	2	n/a	2	2	9	11
15	1	1	2	1	1	2	1	3	11	n/a	1	12	8	1	9	3	n/a	3	6	12	18
16	0	0	0	0	0	0	0	0	13	n/a	0	13	11	1	12	0	n/a	0	0	0	0
17	0	0	0	0	0	0	0	0	10	n/a	0	10	9	0	9	0	n/a	0	0	0	0
18	0	0	0	0	0	0	0	0	8	n/a	1	9	5	2	7	0	n/a	0	0	0	0
19	0	0	0	0	0	0	0	0	4	n/a	0	4	4	0	4	0	n/a	0	0	0	0
20	0	0	0	0	0	0	0	0	5	n/a	0	5	4	1	5	0	n/a	0	0	0	0
21	1	0	1	1	0	1	0	1	4	n/a	0	4	4	0	4	0	n/a	0	0	0	0
23	0	0	0	0	0	0	0	0	7	n/a	0	7	7	0	7	0	n/a	0	0	0	0
25	0	0	0	0	0	0	0	0	0	n/a	0	0	0	5	5	0	n/a	0	0	0	0
27	0	0	0	0	0	0	0	0	8	n/a	0	8	7	1	8	0	n/a	0	0	1	1
28	1	0	1	1	0	1	0	1	5	n/a	0	5	5	0	5	0	n/a	0	1	4	5
29	0	0	0	0	0	0	0	0	2	n/a	0	2	2	0	2	2	n/a	2	2	5	7
30	1	0	1	1	0	1	0	1	3	n/a	0	3	3	0	3	0	n/a	0	0	3	3
31	0	0	0	0	0	0	0	0	3	n/a	0	3	3	0	3	0	n/a	0	0	0	0
32	0	0	0	0	0	0	0	0	5	n/a	0	5	5	0	5	0	n/a	0	0	10	10
33	1	0	1	1	0	1	0	1	6	n/a	0	6	5	1	6	0	n/a	0	0	14	14
34	0	0	0	0	0	0	0	0	4	n/a	0	4	4	0	4	0	n/a	0	0	0	0
35	1	0	1	1	0	1	0	1	3	n/a	0	3	3	0	3	0	n/a	0	0	0	0
36	0	0	0	0	0	0	0	0	5	n/a	0	5	5	0	5	0	n/a	0	0	0	0
37	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
38	0	0	0	0	0	0	0	0	5	n/a	0	5	5	0	5	0	n/a	0	0	0	0
39	0	0	0	0	0	0	0	0	3	n/a	0	3	3	0	3	0	n/a	0	0	2	2
40	0	0	0	0	0	0	0	0	10	n/a	0	10	10	0	10	0	n/a	0	0	7	7
41	0	0	0	0	0	0	0	0	7	n/a	0	7	6	1	7	0	n/a	0	0	0	0
42	0	0	0	0	0	0	0	0	9	n/a	0	9	9	0	9	0	n/a	0	0	0	0
43	0	0	0	0	0	0	0	0	6	n/a	0	6	6	0	6	0	n/a	0	0	0	0
44	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
45	0	0	0	0	0	0	0	0	1	n/a	0	1	1	0	1	0	n/a	0	0	0	0
46	0	0	0	0	0	0	0	0	1	n/a	0	1	1	0	1	0	n/a	0	0	0	0
47	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
48	1	0	1	1	0	1	0	1	2	n/a	0	2	2	0	2	0	n/a	0	0	2	2

Sample	tot CR	tot CR	tot CR	tot KM3 CR^{D}	tot offl CR	tot CR	tot FO	tot FO	tot FO	Picked estimate normalization *				Table feed weight normalization**						
Number	p	p(e)	s	c	c	c	p(e)	s	c	tot (C) KM DC	tot (C) KM BI	tot (C) KM CR	tot (C) KM FO	BP	GO	DC	BI	CR	FO	Table Feed
1	0	n/a	0	0	0	0	0	0	0					0	0	17	0	0	0	4.8
2	0	n/a	0	0	0	0	0	0	0					0	0	37	0	0	0	8.5
3	0	n/a	0	0	0	0	0	0	0					0	2	21	0	0	0	4.6
4	1	n/a	1	0	1	1	0	0	0					0	0	12	0	0	0	7.2
5	0	n/a	0	0	0	0	0	0	0					0	0	21	0	0	0	7.4
6	0	n/a	0	0	0	0	0	0	0					0	0	4	0	0	0	4.5
7	0	n/a	0	0	0	0	0	0	0					0	0	6	0	0	0	6.9
8	0	n/a	0	0	0	0	0	0	0					0	0	8	0	0	0	7.1
9	0	n/a	0	0	0	0	0	0	0					0	0	2	0	0	0	6.8
10	2	5	2	2	0	2	0	0	0			5		0	0	33	0	2	0	6.7
11	0	n/a	0	0	0	0	0	0	0					1	0	6	0	0	0	5.5
12	0	n/a	0	0	0	0	0	0	0					1	0	2	0	0	0	7.1
13	0	n/a	0	0	0	0	0	0	0					0	0	0	0	0	0	6
14	6	n/a	6	4	0	4	0	0	0					0	0	52	3	5	0	5.9
15	2	6	2	2	0	2	0	0	0			6		2	2	12	9	3	0	5.3
16	0	n/a	0	0	0	0	0	0	0					0	0	14	0	0	0	6.3
17	0	n/a	0	0	0	0	0	0	0					0	0	10	0	0	0	7.1
18	0	n/a	0	0	0	0	0	0	0					0	0	10	0	0	0	4
19	0	n/a	0	0	0	0	0	0	0					0	0	7	0	0	0	4.3
20	0	n/a	0	0	0	0	0	0	0					0	0	4	0	0	0	6
21	0	n/a	0	0	0	0	0	0	0					1	0	4	0	0	0	7.8
23	3	n/a	3	3	0	3	0	0	0					0	0	3	0	1	0	16.2
25	1	n/a	1	1	0	1	0	0	0					0	0	0	0	2	0	4.9
27	0	n/a	0	0	0	0	0	0	0					0	0	7	0	0	0	8.6
28	0	n/a	0	0	0	0	0	0	0					1	0	6	1	0	0	6.5
29	9	16	9	6	0	6	0	0	0			11		0	0	3	3	8	0	6.3
30	0	n/a	0	0	0	0	0	0	0					1	0	4	0	0	0	6.3
31	0	n/a	0	0	0	0	0	0	0					0	0	4	0	0	0	6
32	1	n/a	1	1	0	1	0	0	0					0	0	6	0	1	0	6.7
33	13	25	13	12	0	12	0	0	0			23		1	0	7	0	17	0	5.7
34	0	n/a	0	0	0	0	0	0	0					0	0	7	0	0	0	4.9
35	0	n/a	0	0	0	0	0	0	0					2	0	5	0	0	0	4.9
36	1	n/a	1	1	0	1	0	0	0					0	0	8	0	2	0	4.8
37	0	n/a	0	0	0	0	0	0	0					0	0	0	0	0	0	6.7
38	0	n/a	0	0	0	0	0	0	0					0	0	2	0	0	0	17.4
39	0	n/a	0	0	0	0	0	0	0					0	0	1	0	0	0	17.1
40	4	n/a	4	3	1	4	0	0	0					0	0	10	0	3	0	7.9
41	0	n/a	0	0	0	0	0	0	0					0	0	3	0	0	0	18.4
42	0	n/a	0	0	0	0	0	0	0					0	0	4	0	0	0	18.2
43	0	n/a	0	0	0	0	0	0	0					0	0	5	0	0	0	8.9
44	0	n/a	0	0	0	0	0	0	0					0	0	0	0	0	0	6.4
45	0	n/a	0	0	0	0	0	0	0					0	0	1	0	0	0	14
46	0	n/a	0	0	0	0	0	0	0					0	0	0	0	0	0	16.3
47	0	n/a	0	0	0	0	0	0	0					0	0	0	0	0	0	17
48	0	n/a	0	0	0	0	0	0	0					0	0	1	0	0	0	17.3

Sample	tot GP	tot GO	tot GAR	tot GP	tot GO	tot KIM GAR	tot crustal GAR	tot GAR	tot low cr-diop	tot low cr-diop	tot DC	tot diop	tot KIM DC	tot low cr-diop	tot diop	tot IM	tot IM	tot IM	tot KIM IM	tot crustal IM	tot IM
number	p	p	s	c	c	c	c	c	p	p(e)	p	s	c	c	c	p	p(e)	s	c	c	c
49	0	0	0	0	0	0	0	0	1	n/a	0	1	1	0	1	0	n/a	0	0	0	0
50	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
51	0	0	0	0	0	0	0	0	12	n/a	0	12	12	0	12	0	n/a	0	0	0	0
52	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	1	1
53	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	1	0	1
54	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
55	1	0	1	1	0	1	0	1	1	n/a	0	1	1	0	1	1	n/a	1	1	1	2
56	0	0	0	0	0	0	0	0	2	n/a	0	2	2	0	2	0	n/a	0	0	0	0
57	0	0	0	0	0	0	0	0	1	n/a	0	1	1	0	1	0	n/a	0	0	0	0
58	3	0	3	3	0	3	0	3	5	n/a	0	5	4	1	5	1	n/a	1	1	0	1
59	1	0	1	1	0	1	2	3	3	n/a	0	3	3	0	3	0	n/a	0	1	2	3
60	0	0	0	0	0	0	1	1	3	n/a	0	3	2	1	3	0	n/a	0	0	1	1
61	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	1	0	1
62	2	0	2	2	0	2	0	2	0	n/a	0	2	0	2	2	0	n/a	0	0	0	0
63	0	0	0	0	0	0	0	0	6	n/a	0	6	6	0	6	0	n/a	0	0	0	0
64	0	0	0	0	0	0	0	0	17	27	0	17	14	3	17	0	n/a	0	0	0	0
65	0	0	0	0	0	0	1	1	2	n/a	0	2	2	0	2	0	n/a	0	0	6	6
66	0	0	0	0	0	0	0	0	2	n/a	0	2	2	0	2	0	n/a	0	0	0	0
67	1	0	1	1	0	1	0	1	0	n/a	0	0	0	0	0	0	n/a	0	0	3	3
68	1	0	1	1	0	1	0	1	12	n/a	0	12	11	1	12	0	n/a	0	0	0	0
69	0	0	0	0	0	0	0	0	1	n/a	0	1	1	0	1	1	n/a	1	1	1	2
70	0	0	0	0	0	0	0	0	1	n/a	0	1	0	1	1	0	n/a	0	0	0	0
71	0	0	0	0	0	0	0	0	1	n/a	0	1	1	0	1	1	n/a	1	1	0	1
72	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
73	2	1	3	2	0	2	1	3	2	n/a	1	3	1	0	1	6	n/a	6	9	17	26
74	6	2	8	6	2	8	0	8	6	n/a	1	7	2	3	5	7	15	7	6	3	9
75	7	0	7	7	0	7	0	7	9	n/a	1	10	8	0	8	7	14	7	6	12	18
76	0	0	0	0	0	0	0	0	4	n/a	0	4	4	0	4	0	n/a	0	1	1	2
77	0	0	0	0	0	0	0	0	6	n/a	0	6	6	0	6	0	n/a	0	0	0	0
78	0	0	0	0	0	0	0	0	1	n/a	0	1	1	0	1	0	n/a	0	0	0	0
79	0	0	0	0	0	0	0	0	13	n/a	0	13	12	1	13	0	n/a	0	0	9	9
80	0	0	0	0	0	0	0	0	2	n/a	0	2	2	0	2	0	n/a	0	0	0	0
81	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
82	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	2	2
83	2	0	2	2	0	2	0	2	5	n/a	0	5	4	1	5	0	n/a	0	0	0	0
84	0	0	0	0	0	0	0	0	2	n/a	0	2	2	0	2	0	n/a	0	0	0	0
85	0	0	0	0	0	0	0	0	2	n/a	0	2	2	0	2	0	n/a	0	0	0	0
86	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
87	0	0	0	0	0	0	0	0	16	n/a	0	16	16	1	17	0	n/a	0	0	0	0
88	0	0	0	0	0	0	0	0	13	n/a	0	13	12	1	13	0	n/a	0	0	0	0
89	0	0	0	0	0	0	0	0	2	n/a	0	2	2	0	2	0	n/a	0	0	0	0
90	0	0	0	0	0	0	0	0	1	n/a	0	1	1	0	1	0	n/a	0	0	0	0
91	0	0	0	0	0	0	0	0	1	n/a	0	1	1	0	1	0	n/a	0	0	0	0
92	0	0	0	0	0	0	0	0	3	n/a	0	3	3	0	3	0	n/a	0	0	0	0
93	0	0	0	0	0	0	0	0	9	n/a	0	9	6	0	6	0	n/a	0	0	0	0

Sample	tot CR	tot CR	tot CR	tot KBS CR^{D}	tot oth CR	tot CR	tot FO	tot FO	tot FO	Picked estimate normalization*				Table feed weight normalization**						
number	p	p(e)	s	c	c	c	p(e)	s	c	tot (C) KBS DC	tot (C) KBS SM	tot (C) KBS CR	tot (C) KBS FO	GP	GO	DC	SM	CR	FO	Table Feed
49	0	n/a	0	0	0	0	0	0	0					0	0	1	0	0	0	13.5
50	0	n/a	0	0	0	0	0	0	0					0	0	0	0	0	0	6.7
51	0	n/a	0	0	0	0	0	0	0					0	0	5	0	0	0	19.3
52	1	n/a	1	1	0	1	0	0	0					0	0	0	0	1	0	8.3
53	1	n/a	1	0	0	0	0	0	0					0	0	0	1	0	0	6.5
54	0	n/a	0	0	0	0	0	0	0					0	0	0	0	0	0	5.1
55	2	n/a	2	1	0	1	0	0	0					1	0	1	1	1	0	6.7
56	1	n/a	1	1	0	1	0	0	0					0	0	2	0	1	0	8
57	0	n/a	0	0	0	0	0	0	0					0	0	1	0	0	0	12.3
58	4	10	4	4	0	4	0	0	0			10		3	0	4	1	4	0	7.9
59	2	n/a	2	2	0	2	0	0	0					1	0	3	1	2	0	7.9
60	0	n/a	0	0	0	0	0	0	0					0	0	2	0	0	0	10.5
61	0	n/a	0	0	0	0	0	0	0					0	0	0	1	0	0	5.9
62	0	n/a	0	0	0	0	1	1	0					2	0	0	0	0	0	7.2
63	1	n/a	1	0	0	0	0	0	0					0	0	7	0	0	0	6.6
64	1	n/a	1	1	0	1	0	0	0	22				0	0	15	0	1	0	7.4
65	0	n/a	0	0	0	0	0	0	0					0	0	3	0	0	0	6
66	0	n/a	0	0	0	0	0	0	0					0	0	2	0	0	0	7.4
67	0	n/a	0	0	0	0	0	0	0					2	0	0	0	0	0	5.1
68	0	n/a	0	0	0	0	0	0	0					0	0	5	0	0	0	16.7
69	0	n/a	0	0	0	0	0	0	0					0	0	1	1	0	0	6.8
70	0	n/a	0	0	0	0	0	0	0					0	0	0	0	0	0	7.6
71	0	n/a	0	0	0	0	0	0	0					0	0	2	2	0	0	5.3
72	0	n/a	0	0	0	0	0	0	0					0	0	0	0	0	0	7.4
73	44	74	44	31	0	31	0	0	0			52		3	0	1	13	46	0	5.4
74	15	30	15	14	1	15	0	0	0		13	28		6	2	2	6	14	0	7.9
75	9	21	9	7	1	8	0	0	0		12	16		7	0	9	6	7	0	7.5
76	2	n/a	2	0	0	0	0	0	0					0	0	2	1	0	0	14.8
77	0	n/a	0	0	0	0	0	0	0					0	0	8	0	0	0	5.8
78	0	n/a	0	0	0	0	0	0	0					0	0	1	0	0	0	7
79	0	n/a	0	0	0	0	0	0	0					0	0	12	0	0	0	8.2
80	0	n/a	0	0	0	0	0	0	0					0	0	2	0	0	0	7.5
81	0	n/a	0	0	0	0	0	0	0					0	0	0	0	0	0	8.2
82	2	n/a	2	1	0	1	0	0	0					0	0	0	0	1	0	6.4
83	0	n/a	0	0	0	0	0	0	0					2	0	4	0	0	0	8.4
84	0	n/a	0	0	0	0	0	0	0					0	0	3	0	0	0	5.6
85	0	n/a	0	0	0	0	0	0	0					0	0	1	0	0	0	23.6
86	0	n/a	0	0	0	0	0	0	0					0	0	0	0	0	0	6.5
87	0	n/a	0	0	0	0	0	0	0					0	0	17	0	0	0	7.6
88	1	n/a	1	1	0	1	0	0	0					0	0	11	0	1	0	8.5
89	0	n/a	0	0	0	0	0	0	0					0	0	2	0	0	0	8.6
90	0	n/a	0	0	0	0	0	0	0					0	0	1	0	0	0	8.8
91	0	n/a	0	0	0	0	0	0	0					0	0	1	0	0	0	7.6
92	0	n/a	0	0	0	0	0	0	0					0	0	3	0	0	0	7.6
93	0	n/a	0	0	0	0	0	0	0					0	0	6	0	0	0	7.8

Sample	tot GP	tot GO	tot GAR	tot GP	tot GO	tot [illegible] GAR	tot crustal GAR	tot GAR	tot low cr-diop	tot low cr-diop	tot DC	tot diop	tot [illegible] DC	tot low cr-diop	tot diop	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
number	p	p	s	c	c	c	c	c	p	p(s)	p	s	c	c	c	p	p(s)	s	c	c	c
94	0	0	0	0	0	0	0	0	3	n/a	0	3	3	0	3	0	n/a	0	0	0	0
95	0	0	0	0	0	0	0	0	3	n/a	0	3	3	0	3	0	n/a	0	0	0	0
96	3	0	3	3	0	3	0	3	1	n/a	0	1	1	0	1	0	n/a	0	0	0	0
97	7	0	7	7	1	8	0	8	1	n/a	2	3	1	1	2	12	27	12	8	5	13
98	2	0	2	2	0	2	0	2	2	n/a	0	2	1	1	2	1	n/a	1	2	0	2
99	6	0	6	4	1	5	0	5	3	n/a	0	3	3	0	3	0	n/a	0	0	0	0
100	2	0	2	2	0	2	0	2	15	n/a	0	15	1	14	15	1	n/a	1	1	1	2
101	1	0	1	1	0	1	0	1	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
102	5	0	5	5	0	5	0	5	3	n/a	0	3	2	1	3	1	n/a	1	1	0	1
103	0	0	0	0	0	0	0	0	1	n/a	0	1	1	0	1	0	n/a	0	0	5	5
104	0	0	0	0	1	1	0	1	8	n/a	0	9	7	2	9	0	n/a	0	0	2	2
105	0	0	0	0	0	0	0	0	1	n/a	0	1	1	0	1	0	n/a	0	0	4	4
106	0	0	0	0	0	0	0	0	12	n/a	0	2	12	0	12	0	n/a	0	0	3	3
107	0	0	0	0	0	0	0	0	4	n/a	0	4	4	0	4	0	n/a	0	0	1	1
108	0	0	0	0	0	0	0	0	5	n/a	0	5	5	0	5	0	n/a	0	0	0	0
109	0	0	0	0	0	0	0	0	5	n/a	0	5	5	0	5	0	n/a	0	0	0	0
110	0	0	0	0	0	0	0	0	4	n/a	0	4	4	0	4	0	n/a	0	0	0	0
111	2	0	2	2	0	2	0	2	6	n/a	1	7	6	0	6	2	n/a	2	2	13	15
112	0	1	1	0	0	0	1	1	2	n/a	0	2	2	0	2	0	n/a	0	0	0	0
113	0	0	0	0	0	0	0	0	4	n/a	0	4	2	1	3	0	n/a	0	0	0	0
114	0	0	0	0	0	0	0	0	13	n/a	0	13	13	0	13	0	n/a	0	0	0	0
115	0	0	0	0	0	0	0	0	2	n/a	0	2	2	0	2	0	n/a	0	0	0	0
116	0	0	0	0	0	0	0	0	4	n/a	0	4	4	0	4	0	n/a	0	0	0	0
117	0	0	0	0	0	0	0	0	1	n/a	0	1	1	0	1	1	n/a	1	1	1	2
118	0	0	0	0	0	0	0	0	2	n/a	0	2	2	0	2	0	n/a	0	0	0	0
119	0	0	0	0	0	0	0	0	1	n/a	0	0	1	0	1	0	n/a	0	0	0	0
120	0	0	0	0	0	0	0	0	12	n/a	0	1	10	2	12	0	n/a	0	0	0	0
121	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
122	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
123	19	3	22	19	3	22	1	23	9	n/a	0	9	4	5	9	11	31	11	12	8	20
124	1	0	1	1	0	1	0	1	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
125	0	0	0	0	0	0	0	0	1	n/a	0	1	1	0	1	0	n/a	0	0	0	0
126	5	0	5	5	0	5	0	5	5	n/a	1	6	4	1	5	1	n/a	1	2	0	2
127	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
128	1	0	1	1	0	1	0	1	2	n/a	0	2	1	0	1	0	n/a	0	0	0	0
129	3	0	3	3	1	4	0	4	5	n/a	2	7	4	1	5	0	n/a	0	1	0	1
130	3	0	3	2	0	2	0	2	4	n/a	0	0	3	1	4	2	n/a	2	2	1	3
131	2	0	2	1	0	1	0	1	5	n/a	0	5	4	1	5	0	n/a	0	0	1	1
132	5	0	5	4	1	5	0	5	2	n/a	0	2	2	0	2	10	n/a	10	10	1	11
133	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
134	7	0	7	7	0	7	0	7	1	n/a	0	1	0	1	1	5	12	5	5	11	16
135	27	2	29	26	3	29	2	31	22	n/a	1	23	6	15	21	8	12	8	7	4	11
136	5	1	6	6	0	6	0	6	3	n/a	0	3	1	2	3	2	n/a	2	2	0	2
137	1	0	1	1	0	1	1	2	1	n/a	0	1	0	1	1	0	n/a	0	0	0	0
138	4	0	4	4	0	4	1	5	0	n/a	0	0	0	0	0	6	n/a	6	5	1	6

Sample	tot CR	tot CR	tot CR	tot ICM CR	[illegible] CR	tot CR	tot FO	tot FO	tot FO	[illegible] *				[illegible]						
number	p	[illegible]	a	a	c	c	[illegible]	a	c	tot (C) ICM DC	tot (C) [illegible]	tot (C) [illegible]	tot (C) [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
94	0	n/a	0	0	0	0	0	0	0					0	0	4	0	0	0	6
95	0	n/a	0	0	0	0	0	0	0					0	0	3	0	0	0	9.3
96	0	n/a	0	0	0	0	0	0	0					3	0	1	0	0	0	8.7
97	31	100	31	36	0	36	0	0	0		18	116		9	1	1	10	47	0	6.1
98	14	n/a	14	13	0	13	1	1	1					1	0	0	1	6	0	18.3
99	0	n/a	0	0	0	0	0	0	0					1	0	1	0	0	0	23.8
100	3	n/a	3	3	0	3	0	0	0					2	0	1	1	3	0	9
101	0	n/a	0	0	0	0	0	0	0					1	0	0	0	0	0	15.4
102	4	n/a	4	3	1	4	0	0	0					2	0	1	0	1	0	19
103	0	n/a	0	0	0	0	0	0	0					0	0	1	0	0	0	6.7
104	0	n/a	0	0	0	0	0	0	0					0	1	4	0	0	0	14.8
105	0	n/a	0	0	0	0	0	0	0					0	0	1	0	0	0	5.7
106	0	n/a	0	0	0	0	0	0	0					0	0	14	0	0	0	7.1
107	0	n/a	0	0	0	0	0	0	0					0	0	4	0	0	0	7.3
108	0	n/a	0	0	0	0	0	0	0					0	0	5	0	0	0	7.6
109	0	n/a	0	0	0	0	0	0	0					0	0	5	0	0	0	8.6
110	0	n/a	0	0	0	0	0	0	0					0	0	4	0	0	0	7.3
111	4	n/a	4	4	0	4	0	0	0					2	0	7	2	5	0	6.8
112	1	n/a	1	1	0	1	0	0	0					0	0	1	0	1	0	10.7
113	0	n/a	0	0	0	0	0	0	0					0	0	3	0	0	0	5.2
114	0	n/a	0	0	0	0	0	0	0					0	0	13	0	0	0	7.8
115	0	n/a	0	0	0	0	0	0	0					0	0	3	0	0	0	5.8
116	0	n/a	0	0	0	0	0	0	0					0	0	6	0	0	0	5.6
117	0	n/a	0	0	0	0	0	0	0					0	0	2	2	0	0	5.3
118	0	n/a	0	0	0	0	0	0	0					0	0	3	0	0	0	5.4
119	0	n/a	0	0	0	0	0	0	0					0	0	1	0	0	0	6.2
120	0	n/a	0	0	0	0	0	0	0					0	0	13	0	0	0	6.2
121	0	n/a	0	0	0	0	0	0	0					0	0	0	0	0	0	6.8
122	0	n/a	0	0	0	0	0	0	0					0	0	0	0	0	0	5.6
123	34	57	34	22	6	28	0	0	0		34	37		23	4	5	15	27	0	6.5
124	0	n/a	0	0	0	0	0	0	0					1	0	0	0	0	0	9.7
125	0	n/a	0	0	0	0	0	0	0					0	0	1	0	0	0	6.2
126	27	63	27	22	1	23	0	0	0			81		5	0	4	2	23	0	7.6
127	0	n/a	0	0	0	0	0	0	0					0	0	0	0	0	0	7.9
128	0	n/a	0	0	0	0	0	0	0					0	0	0	0	0	0	22.1
129	0	n/a	0	0	0	0	0	0	0					3	1	4	1	0	0	7.2
130	0	n/a	0	0	0	0	0	0	0					2	0	3	2	0	0	7.3
131	0	n/a	0	0	0	0	0	0	0					1	0	6	0	0	0	5.6
132	22	n/a	22	21	0	21	0	0	0					6	2	3	15	32	0	5.3
133	0	n/a	0	0	0	0	0	0	0					0	0	0	0	0	0	5.5
134	37	152	12	37	0	37	0	0	0		12	152		8	0	0	6	42	0	7
135	40	100	43	42	0	42	0	0	0		11	106		29	3	7	8	47	0	7.1
136	1	n/a	2	1	0	1	0	0	0					6	0	1	2	1	0	7.6
137	0	n/a	0	0	0	0	0	0	0					1	0	0	0	0	0	6.7
138	2	n/a	2	2	0	2	0	0	0					5	0	0	7	3	0	5.9

Sample	tot GP	tot GO	tot GAR	tot GP	tot GO	tot [illegible] GAR	tot crustal GAR	tot GAR	tot low cr-disp	tot low cr-disp	tot DC	tot disp	tot [illegible] DC	tot low cr-disp	tot disp	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
number	p	p	s	c	c	c	c	c	p	p(e)	p	s	s	c	s	p	p(e)	s	s	c	c
139	10	2	12	10	2	12	0	12	2	n/a	1	3	0	2	2	16	n/a	16	15	2	17
140	3	1	4	2	2	4	0	4	2	n/a	0	2	0	2	2	1	n/a	1	0	0	0
141	2	0	2	2	0	2	2	4	5	n/a	0	5	0	5	5	1	n/a	1	1	0	1
142	4	0	4	4	0	4	0	4	8	n/a	1	9	0	8	8	0	n/a	0	0	2	2
143	7	2	9	7	1	8	1	9	2	n/a	0	2	0	2	2	8	n/a	8	7	1	8
144	14	3	17	13	4	17	0	17	7	n/a	0	7	1	6	7	10	n/a	10	9	1	10
145	1	0	1	1	0	1	0	1	0	n/a	0	0	0	0	0	1	n/a	1	0	1	1
146	3	0	3	3	0	3	0	3	1	n/a	3	4	0	1	1	3	n/a	3	3	0	3
147	5	0	5	5	0	5	0	5	12	n/a	0	12	0	12	12	0	n/a	0	0	0	0
148	1	0	1	1	0	1	0	1	1	n/a	1	2	1	1	2	1	n/a	1	1	0	1
149	1	0	1	1	0	1	0	1	2	n/a	2	4	3	1	4	3	n/a	2	3	0	3
150	2	0	2	2	0	2	0	2	0	n/a	1	1	1	0	1	0	n/a	0	0	0	0
151	6	0	6	6	0	6	0	6	4	n/a	0	4	0	4	4	8	n/a	8	7	0	7
152	3	0	3	3	0	3	0	3	1	n/a	1	1	0	1	1	0	n/a	0	0	0	0
153	0	0	0	0	0	0	0	0	1	n/a	0	1	0	1	1	0	n/a	0	0	0	0
154	2	2	4	2	2	4	0	4	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
155	2	0	2	2	0	2	0	2	0	n/a	0	0	0	0	0	1	n/a	1	1	0	1
156	8	3	11	8	3	11	1	12	3	n/a	0	3	1	2	3	8	n/a	8	8	0	8
157	1	0	1	1	0	1	0	1	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
158	0	0	0	0	0	0	0	0	5	n/a	0	5	4	1	5	0	n/a	0	0	0	0
159	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
160	0	0	0	0	0	0	0	0	1	n/a	0	1	1	0	1	0	n/a	0	0	0	0
161	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
162	10	2	12	10	2	12	0	12	15	n/a	0	15	2	13	15	4	n/a	4	4	0	4
163	0	0	0	0	0	0	0	0	3	n/a	0	3	0	3	3	0	n/a	0	0	0	0
164	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	1	n/a	1	1	1	2
165	32	9	41	30	5	35	3	38	18	n/a	6	24	5	17	22	78	188	78	76	10	88
166	1	0	1	1	0	1	0	1	0	n/a	1	1	0	0	0	0	n/a	0	0	0	0
167	12	0	12	12	1	13	0	13	4	n/a	1	5	1	4	5	4	n/a	4	4	2	6
168	1	0	1	1	0	1	0	1	3	n/a	0	3	0	3	3	0	n/a	0	0	0	0
169	2	0	2	1	0	1	0	1	0	n/a	0	0	0	0	0	11	n/a	11	10	0	10
170	2	0	2	2	0	2	0	2	0	n/a	0	0	0	0	0	5	n/a	5	4	3	7
171	2	0	2	2	0	2	0	2	2	n/a	0	2	1	2	3	4	n/a	4	4	0	4
172	14	0	14	14	0	14	0	14	2	n/a	0	2	1	1	2	16	n/a	16	12	4	16
173	7	0	7	6	3	9	1	10	1	n/a	2	3	1	2	3	8	n/a	8	9	1	10
174	8	0	8	8	0	8	0	8	6	n/a	0	6	0	6	6	8	n/a	8	8	4	12
175	3	0	3	3	0	3	0	3	4	n/a	1	5	1	4	5	1	n/a	1	1	0	1
176	3	0	3	3	0	3	0	3	2	n/a	0	2	0	2	2	0	n/a	0	0	0	0
177	0	0	0	0	0	0	1	1	1	n/a	0	1	0	1	1	0	n/a	0	0	0	0
178	0	0	0	0	0	0	0	0	2	n/a	0	2	1	1	2	0	n/a	0	0	0	0
179	4	0	4	4	0	4	0	4	5	n/a	0	5	0	5	5	3	n/a	3	2	1	3
180	28	1	29	27	2	29	0	29	20	n/a	4	24	3	25	28	8	n/a	8	6	1	7
181	21	0	21	21	0	21	1	22	7	n/a	1	8	1	8	9	7	n/a	7	7	0	7
182	25	0	25	23	1	24	0	24	0	n/a	1	1	1	0	1	23	n/a	23	20	2	22
183	6	2	8	6	2	8	0	8	1	n/a	0	1	0	1	1	6	n/a	6	5	1	6

Sample	tot CR	tot CR	tot CR	tot KM CR[b]	tot oth CR	tot CR	tot FO	tot FO	tot FO	Plated estimate normalization [a]				Table feed weight normalization[b]						
number	p	p(s)	s	s	c	c	p(s)	s	c	tot (C) KM DC	tot (C) KM BI	tot (C) KM CR	tot (C) KM FO	GP	GO	DC	BI	CR	FO	Table Feed
139	6	n/a	6	6	0	6	0	0	0					17	3	0	26	10	0	4.7
140	0	n/a	0	1	0	1	0	0	0					2	2	0	0	1	0	10
141	1	n/a	1	1	0	1	0	0	0					3	0	0	1	1	0	6.3
142	6	n/a	6	4	1	5	0	1	1					6	0	0	0	6	1	5.7
143	0	n/a	0	0	0	0	0	0	0					10	1	0	10	0	0	5.7
144	0	n/a	0	0	0	0	1	1	1					16	5	1	11	0	1	6.6
145	2	n/a	2	2	0	2	0	0	0					1	0	0	0	2	0	8.3
146	0	n/a	0	0	0	0	0	0	0					5	0	0	5	0	0	5.2
147	5	n/a	5	5	0	5	0	0	0					7	0	0	0	7	0	5.6
148	3	n/a	3	3	0	3	0	0	0					2	0	2	2	5	0	4.8
149	2	n/a	2	1	0	1	0	0	0					3	0	8	8	3	0	3.2
150	0	n/a	0	0	0	0	0	0	0					2	0	1	0	0	0	9.5
151	5	n/a	5	6	0	6	0	0	0					15	0	0	17	15	0	3.3
152	0	n/a	0	0	0	0	0	1	1					3	0	0	0	0	1	7.6
153	1	n/a	1	1	0	1	0	0	0					0	0	0	0	1	0	9.7
154	0	n/a	0	0	0	0	0	0	0					3	3	0	0	0	0	5.9
155	0	n/a	0	0	0	0	0	0	0					3	0	0	1	0	0	6.1
156	1	n/a	1	1	0	1	0	0	0					12	5	2	12	2	0	5.3
157	0	n/a	0	0	0	0	0	0	0					1	0	0	0	0	0	5.6
158	1	n/a	1	1	0	1	0	0	0					0	0	6	0	1	0	5.4
159	1	n/a	1	0	0	0	0	0	0					0	0	0	0	0	0	10.1
160	0	n/a	0	0	0	0	0	0	0					0	0	1	0	0	0	8.1
161	0	n/a	0	0	0	0	0	0	0					0	0	0	0	0	0	10
162	1	n/a	1	1	0	1	2	3	3					13	3	3	5	1	4	6.3
163	0	n/a	0	0	0	0	0	0	0					0	0	0	0	0	0	5.9
164	0	n/a	0	0	0	0	0	0	0					0	0	0	1	0	0	11.5
165	51	106	51	49	1	50	1	2	0		183	102		19	3	3	48	31	0	12.7
166	1	n/a	1	1	0	1	0	0	0					1	0	0	0	1	0	6.6
167	8	n/a	8	7	0	7	0	2	2					24	2	2	8	14	4	4
168	1	n/a	1	1	0	1	0	0	0					1	0	0	0	1	0	7
169	4	n/a	4	5	0	5	0	0	0					2	0	0	22	11	0	3.6
170	1	n/a	1	1	0	1	0	0	0					8	0	0	17	4	0	1.9
171	0	n/a	0	0	0	0	0	0	0					1	0	1	3	0	0	12.4
172	3	n/a	3	3	0	3	0	1	1					15	0	1	13	3	1	7.4
173	13	n/a	13	11	0	11	2	2	2					6	3	1	9	11	2	7.9
174	6	n/a	6	6	0	6	0	0	0					13	0	0	13	10	0	5
175	0	n/a	0	0	0	0	0	0	0					2	0	1	1	0	0	12
176	0	n/a	0	0	0	0	0	0	0					2	0	0	0	0	0	15
177	0	n/a	0	0	0	0	0	0	0					0	0	0	0	0	0	14
178	0	n/a	0	0	0	0	0	0	0					0	0	1	0	0	0	14
179	1	n/a	1	1	0	1	1	3	3					2	0	0	1	1	2	13.2
180	9	n/a	9	8	0	8	0	0	0					15	1	2	3	5	0	14.1
181	3	n/a	3	3	0	3	0	0	0					20	0	1	7	3	0	8.6
182	6	n/a	6	6	0	6	0	0	0					30	1	1	28	8	0	6.2
183	10	n/a	10	10	0	10	0	0	0					7	2	0	6	11	0	7.1

Sample	tot GP	tot GO	tot GAR	tot GP	tot GO	tot KIM GAR	tot crustal GAR	tot GAR	tot low cr-diop	tot low cr-diop	tot DC	tot diop	tot KIM DC	tot low cr-diop	tot diop	tot Ilm	tot Ilm	tot Ilm	tot KIM Ilm	tot crustal Ilm	tot Ilm
number	p	p	s	c	c	c	c	c	p	p(a)	p	s	c	c	c	p	p(a)	s	c	c	c
184	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	2	n/a	2	2	0	2
185	1	0	1	1	0	1	0	1	2	n/a	0	2	0	2	2	0	n/a	0	0	0	0
186	1	0	1	1	0	1	0	1	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
187	4	0	4	4	0	4	0	4	0	n/a	1	1	1	0	1	4	n/a	4	4	2	6
188	12	1	13	12	2	14	0	14	4	n/a	0	4	0	4	4	0	n/a	0	0	0	0
189	2	1	3	2	0	2	1	3	4	n/a	0	4	0	4	4	0	n/a	0	0	0	0
190	0	0	0		0	0	0	0	1	n/a	0	1	0	1	1	1	n/a	1	1	0	1
191	2	0	2	2	0	2	2	4	1	n/a	0	1	0	1	1	1	n/a	1	1	3	4
192	0	1	1	1	0	1	0	1	1	n/a	0	1	0	1	1	2	n/a	2	0	1	1
193	3	0	3	3	0	3	0	3	2	n/a	0	2	0	2	2	2	n/a	2	2	0	2
194	1	0	1	1	0	1	0	1	0	n/a	0	0	0	0	0	1	n/a	1	1	0	1
195	7	2	9	8	2	10	0	10	10	n/a	0	10	0	10	10	1	n/a	1	1	0	1
196	6	0	6	6	0	6	0	6	0	n/a	0	0	0	0	0	1	n/a	1	1	0	1
197	0	0	0	0	0	0	0	0	1	n/a	0	1	1	0	1	0	n/a	0	0	1	1
198	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
199	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
200	1	0	1	1	0	1	0	1	4	n/a	0	4	0	4	4	0	n/a	0	0	0	0
201	0	0	0	0	0	0	1	1	0	n/a	0	0	0	0	0	1	n/a	1	2	1	3
202	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
203	0	0	0	0	0	0	0	0	3	n/a	0	3	3	0	3	0	n/a	0	0	0	0
204	0	0	0	0	0	0	0	0	1	n/a	0	1	1	0	1	0	n/a	0	0	0	0
205	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
206	0	0	0	0	2	2	3	5	0	n/a	0	0	0	0	0	0	n/a	0	0	1	1
207	0	0	0	0	0	0	0	0	3	n/a	0	3	2	1	3	0	n/a	0	0	0	0
208	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
209	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
210	10	2	12	9	4	13	0	13	5	n/a	0	5	1	4	5	4	n/a	4	4	0	4
211	1	0	1	1	0	1	0	1	4	n/a	0	4	0	4	4	0	n/a	0	0	1	1
212	7	4	11	6	4	10	0	10	0	n/a	0	0	0	0	0	27	n/a	27	23	2	25
213	2	1	3	3	0	3	0	3	0	n/a	0	0	0	0	0	6	n/a	6	5	1	6
214	38	6	44	33	5	38	8	46	8	n/a	0	8	0	8	8	112	187	112	94	7	101
215	0	1	1	0	1	1	0	1	2	n/a	0	2	2	0	2	0	n/a	0	0	0	0
216	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
217	7	2	9	7	2	9	0	9	7	n/a	1	8	3	4	7	0	n/a	0	0	0	0
218	13	2	15	14	3	17	1	18	9	n/a	0	9	7	2	9	8	n/a	8	8	1	9
219	5	0	5	5	0	5	0	5	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
220	0	0	0	0	0	0	1	1	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
221	4	1	5	4	1	5	0	5	1	n/a	0	1	0	1	1	0	n/a	0	0	7	7
222	0	0	0	0	0	0	0	0	1	n/a	0	1	1	0	1	0	n/a	0	0	0	0
223	5	0	5	4	0	4	1	5	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
224	0	0	0	0	0	0	0	0	8	n/a	0	8	8	0	8	0	n/a	0	0	0	0
225	0	0	0	0	0	0	0	0	1	n/a	1	1	0	0	0	191	15500	177	198	0	198
226	0	0	0	0	0	0	0	0	4	n/a	1	5	2	3	5	0	n/a	0	3	0	3
227	0	0	0	0	0	0	0	0	1	n/a	0	1	1	0	1	0	n/a	0	9	1	10
228	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	121	4650	111	119	0	119

Sample	tot CR	tot CR	tot CR	tot KIM CR[b]	tot oth CR	tot CR	tot FO	tot FO	tot FO	Picked estimate normalization [c]				Total food weight normalization [d]						
number	p	p(e)	s	s	c	c	p(e)	s	c	tot (C) KIM DC	tot (C) KIM MI	tot (C) KIM CR	tot (C) KIM FO	GP	SO	DC	MI	CR	FO	Total Food
184	0	n/a	0	0	0	0	0	0	0					0	0	0	2	0	0	9.7
185	0	n/a	0	0	0	0	0	0	0					2	0	0	0	0	0	5.3
186	0	n/a	0	0	0	0	0	0	0					1	0	0	0	0	0	6.9
187	3	n/a	3	3	0	3	0	0	0					4	0	1	4	3	0	7.9
188	4	n/a	4	4	0	4	1	1	1					15	3	0	0	5	1	6.2
189	0	n/a	0	0	0	0	0	0	0					2	0	0	0	0	0	7.2
190	0	n/a	0	0	0	0	0	0	0					0	0	0	1	0	0	7
191	1	n/a	1	1	0	1	0	0	0					2	0	0	1	1	0	8.7
192	5	n/a	5	6	0	6	0	0	0					2	0	0	0	12	0	4.1
193	0	n/a	0	0	0	0	0	0	0					5	0	0	3	0	0	4.8
194	0	n/a	0	0	0	0	0	0	0					1	0	0	1	0	0	10.7
195	0	n/a	0	0	0	0	1	1	1					13	3	0	2	0	2	4.9
196	3	n/a	3	3	0	3	0	0	0					7	0	0	1	3	0	6.9
197	64	514	64	62	0	62	0	0	0			498		0	0	1	0	81	0	6.1
198	0	n/a	0	0	0	0	0	0	0					0	0	0	0	0	0	6.8
199	0	n/a	0	0	0	0	0	0	0					0	0	0	0	0	0	5
200	0	n/a	0	0	0	0	0	0	0					1	0	0	0	0	0	5.9
201	1	n/a	1	1	0	1	1	1	1					0	0	0	2	1	1	6.6
202	0	n/a	0	0	0	0	0	0	0					0	0	0	0	0	0	5.2
203	0	n/a	0	0	0	0	0	0	0					0	0	3	0	0	0	7.7
204	0	n/a	0	0	0	0	0	0	0					0	0	1	0	0	0	5.9
205	0	n/a	0	0	0	0	0	0	0					0	0	0	0	0	0	5.1
206	2	n/a	2	2	0	2	0	0	0					0	2	0	0	2	0	7.3
207	0	n/a	0	0	0	0	0	0	0					0	0	3	0	0	0	6
208	0	n/a	0	0	0	0	0	0	0					0	0	0	0	0	0	6.3
209	0	n/a	0	0	0	0	0	0	0					0	0	0	0	0	0	13.7
210	1	n/a	1	1	0	1	0	0	0					7	3	1	3	1	0	9.8
211	1	n/a	1	1	0	1	0	0	0					1	0	0	0	1	0	13.8
212	7	n/a	7	9	0	9	0	0	0					8	5	0	30	12	0	6.2
213	0	n/a	0	0	0	0	0	1	1					4	0	0	7	0	1	6
214	86	206	86	95	0	95	2	2	2		157	228		60	9	0	171	173	4	4.4
215	0	n/a	0	0	0	0	0	0	0					0	1	2	0	0	0	6.5
216	0	n/a	0	0	0	0	0	0	0					0	0	0	0	0	0	10.4
217	0	n/a	0	0	0	0	0	0	0					4	1	2	0	0	0	13.2
218	4	n/a	1	4	0	4	0	0	0					11	2	5	6	3	0	10.3
219	1	n/a	1	1	0	1	0	0	0					5	0	0	0	1	0	8.3
220	0	n/a	0	0	0	0	0	0	0					0	0	0	0	0	0	10.4
221	3	n/a	3	3	0	3	0	0	0					2	1	0	0	2	0	13
222	0	n/a	0	0	0	0	0	0	0					0	0	1	0	0	0	11.3
223	0	n/a	0	0	0	0	0	0	0					3	0	0	0	0	0	10.3
224	0	n/a	0	0	0	0	0	0	0					0	0	16	0	0	0	4.1
225	1	n/a	1	1	0	1	0	0	0		16068			0	0	0	191	1	0	8.3
226	5	n/a	5	4	0	4	0	0	0					0	0	2	3	4	0	8
227	1	n/a	1	1	0	1	0	0	0					0	0	1	9	1	0	8.4
228	0	n/a	0	0	0	0	0	0	0		4573			0	0	0	79	0	0	12.1

Sample	tot GP	tot GO	tot GAR	tot GP	tot GO	tot KIM GAR	tot crustal GAR	tot GAR	tot low cr-diop	tot low cr-diop	tot DC	tot diop	tot KIM DC	tot low cr-diop	tot diop	tot IM	tot IM	tot IM	tot KIM IM	tot crustal IM	tot IM
number	p	p	s	c	c	c	c	c	p	p(e)	p	s	c	c	c	p	p(e)	s	c	c	c
229	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
230	1	0	1	1	0	1	0	1	5	n/a	0	5	2	3	5	0	n/a	0	0	0	0
231	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	1	n/a	1	4	0	4
232	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
233	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
234	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
235	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
236	0	0	0	0	0	0	0	0	2	n/a	0	2	1	1	2	0	n/a	0	0	0	0
237	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	1	n/a	1	1	0	1
238	0	0	0	0	1	1	2	3	0	n/a	0	0	0	0	0	5	n/a	8	10	2	12
239	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
240	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
241	0	0	0	0	0	0	0	0	10	n/a	0	10	9	1	10	0	n/a	0	0	0	0
242	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
243	2	0	2	2	0	2	1	3	2	n/a	0	2	1	1	2	0	n/a	0	0	0	0
244	0	0	0	0	0	0	0	0	1	n/a	0	2	0	2	2	0	n/a	0	0	0	0
245	4	0	4	3	0	3	0	3	3	n/a	0	3	0	3	3	2	n/a	2	2	0	2
246	2	0	2	2	0	2	3	5	0	n/a	0	0	0	0	0	3	n/a	3	5	4	9
247	0	0	0	0	0	0	0	0	0	n/a	1	1	1	0	1	1	n/a	1	1	0	1
248	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
249	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	2	n/a	1	1	0	1
250	3	0	3	2	1	3	0	3	0	n/a	0	0	0	0	0	3	n/a	3	4	0	4
251	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
252	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	1	n/a	1	1	0	1
253	11	3	14	9	2	11	1	12	6	n/a	1	7	2	5	7	28	73	28	25	7	32
254	5	2	7	5	2	7	0	7	9	n/a	0	9	0	9	9	0	n/a	0	2	2	4
255	4	0	4	3	1	4	0	4	6	n/a	0	6	0	6	6	2	n/a	2	2	0	2
256	5	0	5	5	0	5	0	5	2	n/a	0	2	0	2	2	0	n/a	0	0	1	1
257	7	0	7	7	0	7	0	7	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
SG-001	88	37	125	80	45	125	4	129	10	n/a	5	15	6	9	15	102	195	102	97	1	98
SG-002	0	0	0	0	0	0	0	0	7	n/a	0	7	0	7	7	0	n/a	0	0	0	0
SG-003	1	0	1	1	0	1	0	1	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
SG-004	0	0	0	0	0	0	0	0	2	n/a	0	2	2	0	2	0	n/a	0	0	0	0
SG-005	0	0	0	0	0	0	0	0	1	n/a	0	1	1	0	1	0	n/a	0	0	0	0
SG-006	0	0	0	0	0	0	0	0	1	n/a	0	1	0	1	1	0	n/a	0	0	0	0
SG-007	2	1	3	2	1	3	0	3	2	n/a	0	2	1	1	2	0	n/a	0	2	1	3
SG-008	1	1	2	1	1	2	0	2	0	n/a	0	0	0	0	0	0	n/a	0	1	2	3
SG-009	1	0	1	9	0	9	0	9	6	n/a	0	6	3	3	6	0	n/a	0	0	0	0
SG-010	5	0	5	5	0	5	0	5	11	n/a	1	12	4	7	11	3	n/a	3	2	0	2
SG-011	1	0	1	1	0	1	0	1	9	n/a	2	11	3	8	11	1	n/a	1	1	0	1
SG-012	5	0	5	3	0	3	0	3	4	n/a	0	4	1	3	4	0	n/a	0	0	0	0
SG-013	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
SG-014	0	0	0	0	0	0	0	0	0	n/a	0	0	0	0	0	0	n/a	0	0	0	0
TM-001	0	0	0	0	0	0	0	0	16	n/a	0	2	15	2	17	0	n/a	0	0	0	0
TM-002	3	0	3	3	0	3	0	3	1	n/a	0	1	0	1	1	2	n/a	2	1	1	2
TM-003	1	0	1	0	0	0	0	0	1	n/a	0	1	0	1	1	0	n/a	0	0	1	1
TM-004	0	1	1	0	1	1	0	1	3	n/a	0	3	1	2	3	6	n/a	6	5	5	10

Sample	tot CR	tot CR	tot CR	tot KIM CR[D]	tot oth CR	tot CR	tot FO	tot FO	tot FO	Picked estimate normalization *				Table feed weight normalization**						
number	p	p(e)	s	c	c	c	p(e)	s	c	tot (C) KIM DC	tot (C) KIM M	tot (C) KIM CR	tot (C) KIM FO	GP	GO	DC	M	CR	FO	Table Feed
229	0	n/a	0	**0**	0	0	0	0	**0**					0	0	0	0	0	0	5.2
230	1	n/a	1	**1**	0	1	0	0	**0**					1	0	1	0	1	0	12.2
231	1	n/a	1	**1**	0	1	0	0	**0**					0	0	0	3	1	0	10.2
232	0	n/a	0	**0**	0	0	0	0	**0**					0	0	0	0	0	0	8.8
233	4	n/a	4	**4**	0	4	0	0	**0**					0	0	0	0	5	0	6.2
234	1	n/a	1	**0**	0	0	0	0	**0**					0	0	0	0	0	0	6.7
235	0	n/a	0	**0**	0	0	0	0	**0**					0	0	0	0	0	0	9.1
236	1	n/a	1	**1**	0	1	0	0	**0**					0	0	1	0	1	0	9.9
237	9	n/a	9	**9**	0	9	0	0	**0**					0	0	0	1	6	0	11.5
238	17	n/a	20	**15**	0	15	0	0	**0**					0	1	0	7	11	0	10.7
239	0	n/a	0	**0**	0	0	0	0	**0**					0	0	0	0	0	0	6.9
240	0	n/a	0	**0**	0	0	0	0	**0**					0	0	0	0	0	0	9.5
241	0	n/a	0	**0**	0	0	0	0	**0**					0	0	7	0	0	0	10
242	2	n/a	2	**2**	0	2	0	0	**0**					0	0	0	0	2	0	8.7
243	2	n/a	2	**2**	0	2	0	0	**0**					2	0	1	0	2	0	9.1
244	0	n/a	0	**0**	0	0	0	0	**0**					0	0	0	0	0	0	10.9
245	0	n/a	0	**0**	0	0	0	0	**0**					3	0	0	2	0	0	9.1
246	12	n/a	12	**10**	0	10	0	0	**0**					2	0	0	5	9	0	8.8
247	1	n/a	1	**1**	0	1	0	0	**0**					0	0	1	1	1	0	6.5
248	0	n/a	0	**0**	0	0	0	0	**0**					0	0	0	0	0	0	3.2
249	3	n/a	3	**2**	1	3	0	0	**0**					0	0	0	2	5	0	3.5
250	30	45	30	**29**	0	29	0	0	**0**			**44**		7	3	0	13	97	0	2.4
251	1	n/a	1	**1**	0	1	0	0	**0**					0	0	0	0	2	0	3.3
252	0	n/a	0	**0**	0	0	0	0	**0**					0	0	0	2	0	0	4.4
253	31	61	31	**29**	0	29	0	2	**2**		**65**	**57**		7	2	2	19	22	2	10.5
254	14	n/a	14	**7**	0	7	0	0	**0**					8	3	0	3	11	0	5.3
255	1	n/a	1	**1**	0	1	0	0	**0**					4	1	0	2	1	0	6.8
256	0	n/a	0	**0**	0	0	0	1	**1**					4	0	0	0	0	1	10.7
257	0	n/a	0	**0**	0	0	0	0	**0**					6	0	0	0	0	0	10
SG-001	8	16	8	**10**	0	10	2(10)	**4**	**3**		**185**	**20**	**15**	100	56	8	121	13	4	6.4
SG-002	2	n/a	2	**1**	1	2	0	0	**0**					0	0	0	0	1	0	6.2
SG-003	0	n/a	0	**0**	0	0	0	0	**0**					1	0	0	0	0	0	7.8
SG-004	1	n/a	1	**1**	0	1	0	0	**0**					0	0	2	0	1	0	8
SG-005	3	n/a	3	**3**	0	3	0	0	**0**					0	0	1	0	3	0	9.3
SG-006	0	n/a	0	**0**	0	0	0	0	**0**					0	0	0	0	0	0	8.5
SG-007	25	40	25	**22**	0	22	0	1	**1**			**35**		2	1	1	2	21	1	8.5
SG-008	4	n/a	4	**3**	0	3	1	1	**1**					1	1	0	1	3	1	7.5
SG-009	2	n/a	2	**1**	0	1	0	0	**0**					11	0	4	0	1	0	6.3
SG-010	3	n/a	3	**2**	0	2	0	0	**0**					4	0	3	2	2	0	9.2
SG-011	2	n/a	2	**1**	0	1	0	0	**0**					1	0	3	1	1	0	8.4
SG-012	9	n/a	9	**6**	0	6	0	0	**0**					3	0	1	0	5	0	8.8
SG-013	0	n/a	0	**0**	0	0	0	0	**0**					0	0	0	0	0	0	8.6
SG-014	0	n/a	0	**0**	0	0	0	0	**0**					0	0	0	0	0	0	9.2
TM-001	0	n/a	0	**0**	0	0	0	0	**0**					0	0	13	0	0	0	9.1
TM-002	1	n/a	1	**1**	0	1	0	0	**0**					3	0	0	1	1	0	8
TM-003	1	n/a	1	**0**	0	0	0	0	**0**					0	0	0	0	0	0	5.6
TM-004	6	n/a	6	**5**	0	5	0	0	**0**					0	1	1	5	5	0	7.9

Sample	tot GP	tot GO	tot GAR	tot GP	tot GO	tot KIM GAR	tot crustal GAR	tot GAR	tot low cr-diop	tot low cr-diop	tot DC	tot diop	tot KIM DC	tot low cr-diop	tot diop	tot IM	tot IM	tot IM	tot KIM IM	tot crustal IM	tot IM
number	p	p	s	c	c	c	c	c	p	p(e)	p	s	c	c	c	p	p(e)	s	s	c	c
TM-005	12	8	20	13	7	20	1	21	4	n/a	0	4	0	4	4	34	n/a	34	28	5	33
TM-006	1	0	1	1	0	1	0	1	3	n/a	1	4	1	3	4	0	n/a	0	0	0	0
TM-007	0	0	0	0	0	0	1	1	5	n/a	0	5	0	5	5	0	n/a	0	0	1	1
TM-008	0	0	0	0	0	0	0	0	1	n/a	1	2	1	1	2	3	n/a	3	1	1	2
BD-001	2	1	3	2	1	3	1	4	7	n/a	0	7	1	6	7	3	n/a	3	3	0	3

Sample	tot CR	tot CR	tot CR	tot KIM CR^{D}	tot oth CR	tot CR	tot FO	tot FO	tot FO	Picked estimate normalization *				Table feed weight normalization**						
number	p	p(e)	s	c	c	c	p(e)	s	c	tot (C) KIM DC	tot (C) KIM IM	tot (C) KIM CR	tot (C) KIM FO	GP	GO	DC	IM	CR	FO	Table Feed
TM-005	3	n/a	3	3	0	3	1	3	3					11	6	0	24	3	3	9.2
TM-006	4	n/a	4	4	0	4	0	0	0					1	0	1	0	4	0	8
TM-007	3	n/a	3	3	0	3	0	1	1					0	0	0	0	3	1	7.5
TM-008	2	n/a	2	3	0	3	0	0	0					0	0	1	1	3	0	7.2
BD-001	4	n/a	4	4	0	4	1	1	1					2	1	1	3	4	1	8.4

Metric Conversion Table

Conversion from SI to Imperial			Conversion from Imperial to SI		
SI Unit	*Multiplied by*	*Gives*	*Imperial Unit*	*Multiplied by*	*Gives*
			LENGTH		
1 mm	0.039 37	inches	1 inch	**25.4**	mm
1 cm	0.393 70	inches	1 inch	**2.54**	cm
1 m	3.280 84	feet	1 foot	**0.304 8**	m
1 m	0.049 709	chains	1 chain	20.116 8	m
1 km	0.621 371	miles (statute)	1 mile (statute)	**1.609 344**	km
			AREA		
1 cm^2	0.155 0	square inches	1 square inch	**6.451 6**	cm^2
1 m^2	10.763 9	square feet	1 square foot	**0.092 903 04**	m^2
1 km^2	0.386 10	square miles	1 square mile	2.589 988	km^2
1 ha	2.471 054	acres	1 acre	0.404 685 6	ha
			VOLUME		
1 cm^3	0.061 023	cubic inches	1 cubic inch	**16.387 064**	cm^3
1 m^3	35.314 7	cubic feet	1 cubic foot	0.028 316 85	m^3
1 m^3	1.307 951	cubic yards	1 cubic yard	0.764 554 86	m^3
			CAPACITY		
1 L	1.759 755	pints	1 pint	0.568 261	L
1 L	0.879 877	quarts	1 quart	1.136 522	L
1 L	0.219 969	gallons	1 gallon	**4.546 090**	L
			MASS		
1 g	0.035 273 962	ounces (avdp)	1 ounce (avdp)	28.349 523	g
1 g	0.032 150 747	ounces (troy)	1 ounce (troy)	**31.103 476 8**	g
1 kg	2.204 622 6	pounds (avdp)	1 pound (avdp)	**0.453 592 37**	kg
1 kg	0.001 102 3	tons (short)	1 ton (short)	**907.184 74**	kg
1 t	1.102 311 3	tons (short)	1 ton (short)	**0.907 184 74**	t
1 kg	0.000 984 21	tons (long)	1 ton (long)	**1016.046 908 8**	kg
1 t	0.984 206 5	tons (long)	1 ton (long)	**1.016 046 90**	t
			CONCENTRATION		
1 g/t	0.029 166 6	ounce (troy)/ ton (short)	1 ounce (troy)/ ton (short)	34.285 714 2	g/t
1 g/t	0.583 333 33	pennyweights/ ton (short)	1 pennyweight/ ton (short)	1.714 285 7	g/t

OTHER USEFUL CONVERSION FACTORS

	Multiplied by	
1 ounce (troy) per ton (short)	31.103 477	grams per ton (short)
1 gram per ton (short)	0.032 151	ounces (troy) per ton (short)
1 ounce (troy) per ton (short)	20.0	pennyweights per ton (short)
1 pennyweight per ton (short)	0.05	ounces (troy) per ton (short)

Note: Conversion factors which are in bold type are exact. The conversion factors have been taken from or have been derived from factors given in the Metric Practice Guide for the Canadian Mining and Metallurgical Industries, published by the Mining Association of Canada in co-operation with the Coal Association of Canada.

MAPS NOT FILMED

CARTES NON REPRODUITES

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